

BOARDWATCH MAGAZINE

Guide to the Internet, World Wide Web and BBS

JAVA GETS REAL

**New Netscape 2.0
Enables JAVA** (pg.60)

**How to Add BBS
Features to WWW
Using JAVA** (pg.74)

**WINDOWS 95:
WINS & LMHOSTS**
Sharing Folders and Files
Across the Internet

DIGIPHONE
Voice Over The Internet
Without Long Distance Fees

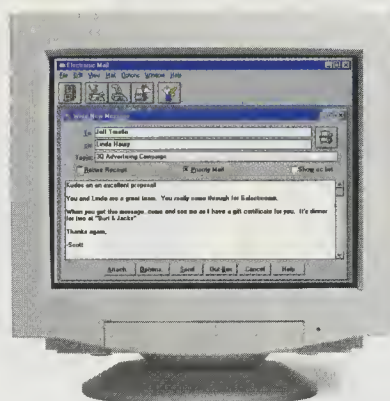
NEWT GINGRICH
Speaker of the U.S. House
of Representatives Describes
"The Promise of Cyberspace"



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Wow! You can do this

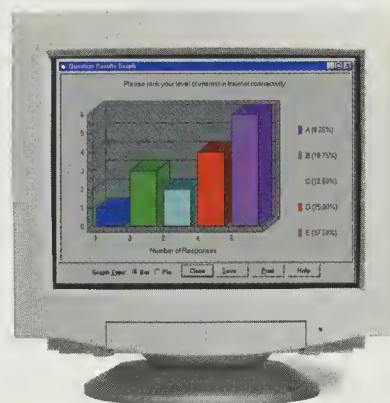
Users easily manage their mail online or offline with distribution lists, file cabinet, address book, in box, out box and more.



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For non-client users, ASCII, ANSI and RIP terminals are also supported, bringing you the widest possible audience.

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Allow your users to exchange Internet messages with SMTP e-mail, NNTP newsgroups and POP3 mail delivery capability for cross-platform compatibility.

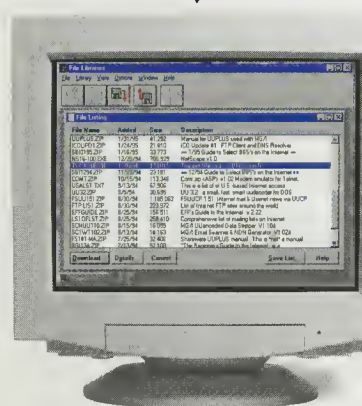
Promote your products and services over the Internet with a stunning multimedia Web site. Forms, imagemaps and secure Web pages are all supported on this standard HTTP 1.0-compliant Web server.

over the Internet?!!

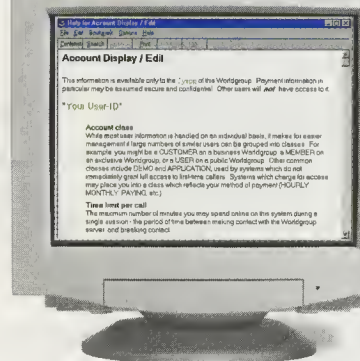
Users can chat, whisper, sketch diagrams and exchange files with each other in the multiuser teleconference.



Users can browse through full-screen file listings and easily download files of interest.



Set up your own Web site to promote your products and services over the Internet.



Online help is available at every window, with explanations on how to use Worldgroup's services.

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BOARDWATCH MAGAZINE

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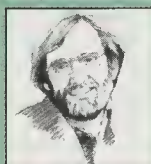
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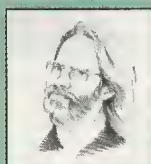
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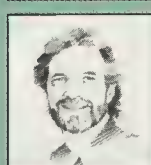
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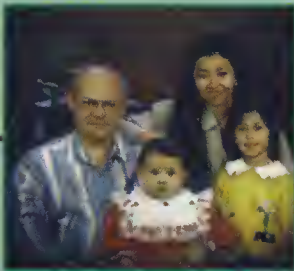
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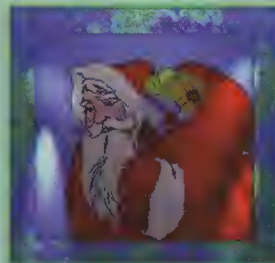


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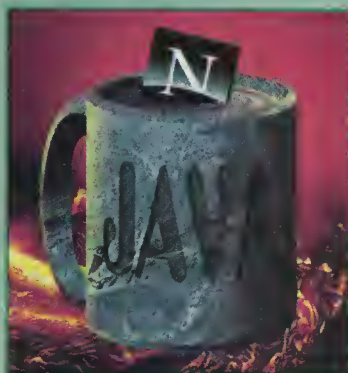
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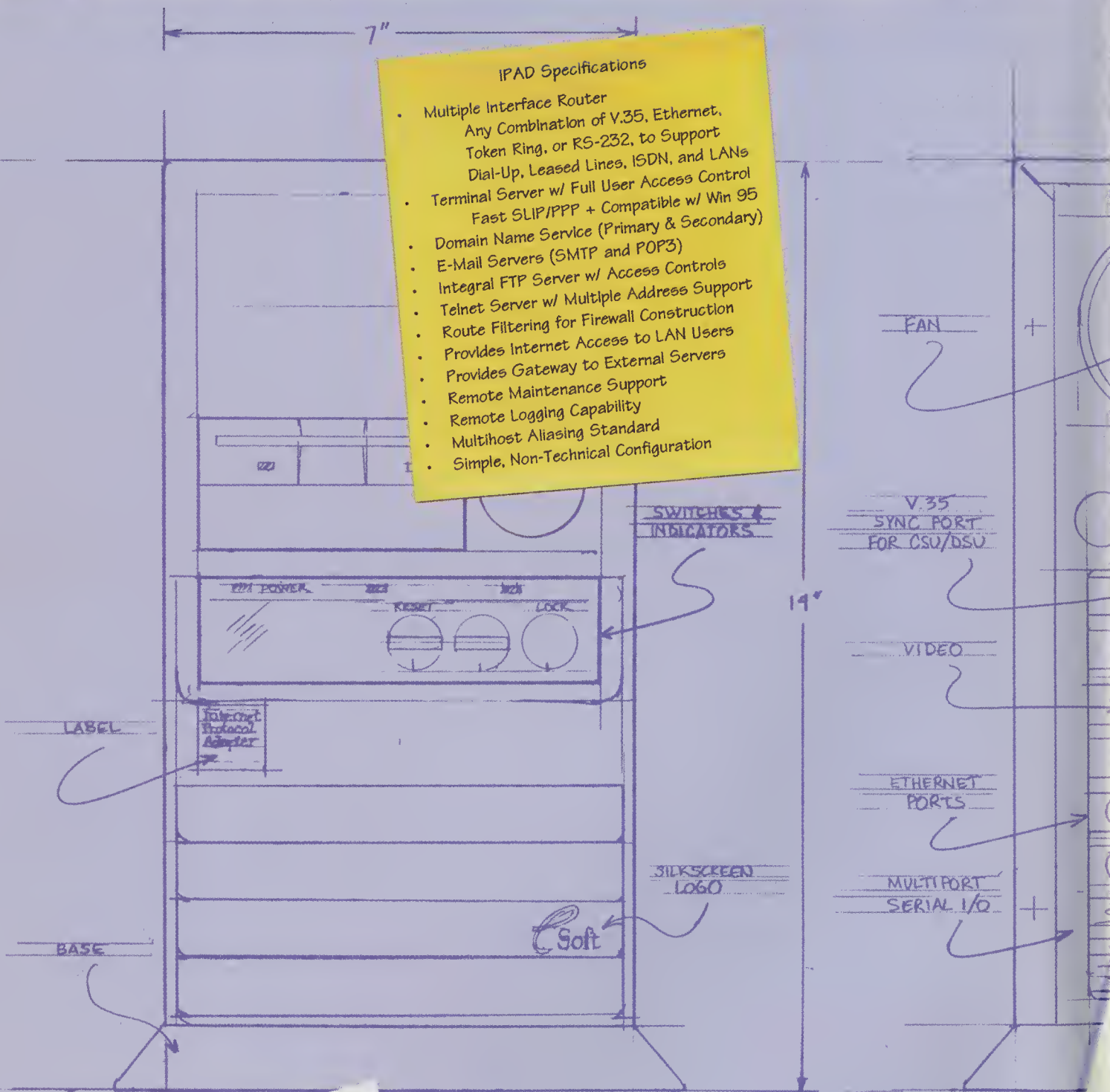
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Cover Illustration by James Kovac

Okay, Phil . . .

IPAD Specifications

- Multiple Interface Router
 - Any Combination of V.35, Ethernet, Token Ring, or RS-232, to Support Dial-Up, Leased Lines, ISDN, and LANs
- Terminal Server w/ Full User Access Control
 - Fast SLIP/PPP + Compatible w/ Win 95
- Domain Name Service (Primary & Secondary)
- E-Mail Servers (SMTP and POP3)
- Integral FTP Server w/ Access Controls
- Telnet Server w/ Multiple Address Support
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- Provides Internet Access to LAN Users
- Provides Gateway to External Servers
- Remote Maintenance Support
- Remote Logging Capability
- Multihost Aliasing Standard
- Simple, Non-Technical Configuration



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on the Internet at:
<http://www.esoft.com/>

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APPROVED: *AM*
REVISION: *1*

I'm telling them!

Memorandum

eSoft

To: Alan Bryant, Director of Marketing
From: Phil Becker, President
Re: Internet Protocol Adapter (IPAD)

Alan,

Over the past two years our engineers have taken the hardware from design to production and completed a full one year field test to prove that the IPAD really is the Internet Connectivity Appliance we set out to make. Those lucky enough to find out about the test program and get an IPAD have clearly said that it is a winner – it allowed most of them to have their Internet connection up and running in a single day! The IPAD even won the Dvorak Award for Telecommunications Excellence!

I know you're aware that we've implemented our "100% solution" program allowing us to sell a quality leased line to the Internet, the CSU/DSU to connect it, the IPAD and, if the customer wants it, even fully configured web servers with either WebSite or Netscape software to make a total Internet presence!

We've even put in place our Certified System Integrator program so we can support integrators who install systems based on IPADs, and you know that the production line is running and IPADs are available for immediate delivery!

As I remember it, you are our Director of Marketing. So how come you haven't yet told a SINGLE PERSON that they can buy IPADs NOW!?! Quit staring at that blueprint and tell them that if they call eSoft at (303) 699-6565 they will no longer be alone in the Internet Jungle. Make their life easier – tell them to call and find out about this hot stuff! I promise you they'll thank you for it.



EDITOR'S NOTES

THE INTERNET BY THE NUMBERS— 9.1 MILLION USERS CAN'T BE WRONG

There is a natural desire to be part of something larger than ourselves. And if it is something we are enthusiastic about there is a further desire for it to be as large as possible. So I suppose it is also natural to overstate the case wherever you can get away with it.

Harmless enough for some uses, this is a dangerous thing for those who make business or policy decisions based on overstatements and loosely estimated optimistic projections. The online community in general, and most wantonly the Internet portion of it, has a history of inflating virtually all measures of usage sufficiently to qualify as a case of "liar, liar, pants on fire." I could easily make this case and move on by noting that two years ago there were numerous estimates of 30 million Internet users and that usage was roughly doubling each year. Now, two years later, they still claim 30 million users and further claim that the rate of growth has increased as well. This isn't graduate level computer science, but rather a failure of second-grade arithmetic.

But for many of our readers, realistic estimates of the universe of people who COULD technically access the Internet, and realistic estimates of the universe of those who DO access the Internet, and what they do once they are there, are essential in the art of producing realistic business and marketing plans. Further, if they can develop something of a track record of business with a given universe, and then accurately track and perhaps to some degree predict the growth of the universe, they can plan for the growth of their own part of it with some level of emotional confidence if not accuracy. For many, numbers ARE important.

Over the past year, I have spoken at numerous conferences and meetings across the country, intending to be

there in my accustomed role as enthusiastic supporter and proponent of PC communications at all levels. But inevitably, after hearing a few of the other hysterically enthusiastic, and no doubt well intentioned, speakers spew forth a flood tide of numbers and statistics, almost all of which were not just hopelessly optimistic and lacking any methodology, but actually damaging to any hapless yuk naïve enough to believe them, I found myself in the unnatural position of delivering the "booger" message. Essentially, that most everything they had heard thus far at the meeting was bullshit.

This is actually pretty entertaining, because usually by the time I speak, there have been sufficient numbers of prior speakers that everyone in the room pretty much knows it is bullshit, and they are greatly relieved when someone actually gives voice to their vague feelings of unease.

But they remain with a curiosity and indeed a real need to know about the size of the universe and how to do credible planning for their projects. I lay no claim to having the best and final numbers to present. But we at Boardwatch have over the years developed a certain credibility and following by hewing to a very conservative line with regards to numbers. If you cannot prove it and empirically duplicate it, it probably isn't so. I would note a growing flood of estimates by groups all over the country. And so it might be useful to discuss briefly how estimates have been generated in the past, why they look foolish after a bit of time, how to evaluate numbers you see presented. My goal here is to equip you to go find credible numbers at any time.

THE SOURCE OF ALL INTERNET NUMBERS AND A BIT OF HISTORY

Until very recently, the source and fount of all Internet numbers has been the HOST COUNT maintained by Mark Lottor. Mr. Lottor is a principal at Network Wizards and I'll say up front that he is NOT responsible for all the

sins perpetrated in his name or derived from his work. He has for many years used a technical/software methodology to count precisely TWO things, the number of hosts on the Internet, and what percentage of them were reachable using the ICMP protocol more commonly known as PING. He has been very careful not to project any extraordinary numbers from the results, but rather simply counts hosts. Anyone can freely access his host counts at <http://www.nw.com>.

Date	Hosts	Domains	Replied To Ping	Network Class A	B	C
Jul 95	6,642,000	120,000	1,249,000	91	5390	54057
Jan 95	4,832,000	71,000	970,000	91	4579	34340
Oct 94	3,664,000	56,000	1,024,000	93	4811	32098
Jul 94	3,212,000	46,000	707,000	89	4430	20428
Jan 94	2,217,000	30,000	576,000	74	4043	16422
Oct 93	2,058,000	28,000		69	3849	12615
Jul 93	1,776,000	26,000	464,000	67	3778	9972
Apr 93	1,486,000	21,000	421,000	58	3409	4255
Jan 93	1,313,000	21,000		54	3204	4998

(* estimated by pinging 1% of all hosts)

A "host" in Internet numerology parlance is simply a computer. In the very early days of the Internet, the network protocol was used to connect a handful of mainframe computers and each was referred to as a host. Any number of "users" might be using a "host" but each host had its own IP number on the network. Lottor has developed some software that "walks" the domain name "tree" locating and counts the IP numbers that are ostensibly associated with individual computers.

The most valuable thing about this methodology is that it has held stable and true over time. They have basically done it the same way over a number of years and so it is a constant in the face of a clearly growing network. As such, it is a relative measure of growth absolute to itself. In August of 1981 there were 213 computers connected to the Internet. In July of 1995, there are 6,642,000 computers connected to the Internet world wide and about perhaps 4.25 million of these are physically

located in the United States. Since essentially the same methodology was used from the early 80's, we know that if the 213 figure is acceptable, then the 6,642,000 figure is acceptable on the same basis and the growth between the two numbers is true, whether or not the absolute number is true.

And "walking the tree" has some problems that may make it untrue in an absolute sense. This was recognized early on and an associated methodology was developed, though the results from the beginning have never been adequately explained. That is, to select a certain percentage of the computers counted, and ping them. PING is a simple program that sends out a brief canned message over the Internet to another computer, and it responds with a similarly canned answer, and we can further measure the roundtrip time to complete all of this, generally in hundreds of milliseconds. By pinging a random 1% of the hosts counted, Lottor projects that of the 6,772,000 hosts connected, 1,149,000 are PINGABLE. That is, of the 6,772,000 computers ostensibly "on" the Internet, about 17.3% of them are really ON the Internet at any one time.

And the percentage has declined over the life of the methodology. I think this is a function of the increasing numbers of computers that are personal computers instead of mainframe and mini-computers. You might turn off your PC when you leave work, though most of us don't. You wouldn't do that with a mainframe or minicomputer. And I think it perhaps reflects the increasing number of personal computers that are connected via intermittent dial-up SLIP/PPP connections. Functions such as the dynamic allocation of IP numbers complicate this further. You might have a block of 255 class C IP number addresses that is in reality used by several hundred or even thousands of callers who are basically "sharing" IP numbers in a dynamic fashion as they dial in and drop off.

Virtually EVERY estimate of Internet usage developed until the past few months has used this host count as the only reliable element in the estimate. And almost all are some version of the question, "How many people use a single computer?" The reasoning goes something like this. "IBM has a single host with 250,000 users, and no computer has less than one user, so there must be some factor of users per computer that allows us to estimate the number of users on the Internet.."

The most common "factor" cited is 10. It was based on NO methodology at all. It was an estimate of the "anyone with any sense would recognize...." form. At two million hosts, this gives rise to the 20 million user figure. At 3 million hosts, this results in the 30 million estimate. At 4 million hosts, knowing something is wrong here, we can always downgrade the 10, since it was entirely baseless to begin with, to 7, and still claim 28 million now "real" users. And so it goes. Adults with some experience, estimating things might find this methodology or lack thereof shocking, but there it is.

The basic line of reasoning itself was flawed. IBM did at one time have a single computer with over 200,000 users. It doesn't actually now. It has lots of computers connected to the Internet, lots of IP numbers, and lots of users in an almost unmappable network of its own. But it is extremely doubtful that a single computer at IBM today, sporting a single IP number, is servicing 200,000 users. And in the days when it might have been true, all but an infinitesimal fraction of the user base KNEW it was connected to an Internet, what an Internet was, or why anyone would care.

Similarly, the position that all computers have a humanoid somehow attached to them is completely untrue. At Boardwatch, we have 14 employees, and about 25 computers, many of which simply perform tasks with no one ever at the helm at all. Worse, of the 14 employees, about five use the Internet daily, perhaps 8 total use it at all, ever, for anything, even for e-mail.

So my best guess at a "factor" would be ONE computer for every humanoid. This leaves us with 6,642,000 users world wide and about 4.5 million users in the U.S. But it too is a guess, not a methodology. In any event, if you do ever hear anyone explaining how many people per computer on the Internet, know that they don't know, and it is unlikely that they will ever know.

JOHN QUARTERMAN AND MIDS.

John Quarterman is currently a principal in Texas Internet Consulting in Austin, and the editor of the Matrix News, a monthly newsletter. Quarterman wrote what has to be the FIRST Internet book, at a time when no one knew what that was really, and it was published in a very small run. It was titled *THE MATRIX*. Quarterman very astutely delineated between those

who were connected to the Internet, and those who used it any way. What I mean by that is that the best and highest use of the Internet is as a common electronic backplane for electronic mail.

All of Fidonet, for example, can use the Internet to pass e-mail messages to users on CompuServe for example, without the CompuServe user ever actually feeling they were "on" the Internet or using any of the interactive ftp, telnet, World Wide Web, Gopher sorts of applications. You can use CompuServe mail and I can use Fidomail and we can correspond because the Internet is the medium whereby the messages traffic.

Further, in many parts of the world, IP connectivity is horrendously expensive. There are still tens of thousands of computers that connect to the Internet briefly using the ancient Unix to Unix Copy Program "g" protocol (UUCPg) to swap mail with a brief dialup connection. So Quarterman defined the MATRIX as the sum total of all computers and people who were somehow connected, however intermittently, for the sharing of information of any kind. He naturally viewed THE Internet as the heart of the Matrix, but not necessarily the majority of it and in fact, after the fashion of most of the knowledgeable old-time Internet veterans, views The Internet with a capital I as a notable internet in a world of TCP/IP internets operated by companies and entities with no real connection to THE Internet.

Today, Quarterman publishes a monthly newsletter titled The Matrix News, along with some quarterly statistical maps and you can contact him at <http://www.mids.org>. One of the fascinating things you will find there is a thing called the *Internet Weather Report*. We're just fascinated by this bit of work. Quarterman has set up a program that pings 4000 major Internet sites every four hours. It derives a database with the geographic location of each site, and the time in milliseconds the ping took. The theory is that locations with high ping latency will have slow response times. The upper end of



Continued on page 64



Letters to the Editor

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LETTERS TO THE EDITOR

Address correspondence to Letters to the Editor, Boardwatch Magazine, 8500 West Bowles Ave., Suite 210, Littleton, CO 80123; by fax to (303)973-3731 or by e-mail to letters@boardwatch.com

WINDOWS 95 - CONNECTED

Hi Jack:

Just finished reading the November issue of BW. Great editorial and an even greater article - Windows 95 - Connected. I would like your permission to post your article about Windows 95 on my ISP "GoldenGate Internet Services" home page for downloading by our clients. This is one of the most comprehensive Win 95 setup tutorials that I have seen. The article would be posted in its entirety including copyright info.

I know you're a busy guy. Reply when you can.

Timothy K. McGarry
timmc@goldengate.net
GoldenGate Internet Services
Fridley, Minnesota

Timothy:

Very pleased you found it useful. Actually, our line of reasoning with Windows95 is interesting. Boardwatch really isn't a consumer magazine - most of our readers are BBS operators, software developers, and increasingly Internet Service Providers. With the introduction of Windows95, we saw a period of confusion where subscribers to Internet services struggled to make the conversion to Windows95 and still retain TCP/IP connectivity via a dialup SLIP or PPP connection. What would they encounter? What questions would they ask? And the Windows95 tutorial (we don't normally DO tutorials) was intended for just this purpose. Something an ISP could hand a caller and tell them to "take two of these and call me in the morning if you have problems." I'm extremely pleased that our first feedback on this column was from ISP's and far from condemning us for doing basic stories, seemed to be along the lines of your own letter.

You may reproduce the article on your web page as long as you include our full contact and subscription information. But it rather misses the point of the web. You can just as easily insert a pointer directly to the article itself on our web page at <http://www.boardwatch.com>, and do it without all the work.

In this issue, we continue with two articles on how to share folders and files "the Microsoft way" but over a TCP/IP Internet (our way). It's a bit more advanced, but should be similarly useful to your subscribing Internauts.

Good luck with your system.

Jack Rickard

INTERNET IN SPAIN

Hello:

Our company has been working for years with ESoft-based BBSs and now we are trying to set up our own web server. We want to have both systems connected and so our LAN. But we are having several problems with it.

We'd be most grateful if you could help us for we think you are an authority on these subjects. So here are some questions:

a) Permanent connection to Internet in Spain - as an information provider - is very expensive at the moment. So we would like to know if there is any other way to connect to a web server for doing preliminary testing of the system and commercial demos.

b) Once we have our web server connected what has to be made in order to access information and applications on our LAN? I mean at a software level, once physical LAN connection is ready.

c) And how can we enter our BBS from our web server?

d) Which kind of database is the best for accessing from both BBS and web server? We think it must be a Windows-based database with EXE-routines developed in Clarion, Visual Basic or a language like these. But what is the one you recommend us?

Well, that's all. We are very interested in your help and will e-mail you again soon in case you don't answer because we want to have our system ready to work a.s.a.p.!

Thank you very much for your attention.

- Manuel Casal Lodeiro -
casal@bi.compulink.es
COMPULINK - ELECTRONICA LOGICA
Galeria Comercial Indautxu, s/n
48010 Bilbao
SPAIN
Tfno.: + 34 4 441 43 69
Fax: + 34 4 443 63 44

Mr. Lodeiro:

You do not need to connect to the Internet at all to develop your own web site. In fact, it would appear the major market for Web servers is to host in-house web info services within companies on the local LAN or private internetwork. You can use the TCP/IP protocol over ethernet in a very local sense for development and demonstration with no con-

nection to the wider Internet at all. When you are ready, you simply add a connection to the wider world.

This actually has kind of interesting implications for dial-up bulletin boards. It would be fairly trivial to connect a SLIP/PPP server machine, such as eSoft's IPAD, to allow a dial-up connection that uses TCP/IP to an "internet" consisting of a single other machine, a web server. Two computers on a LAN, but instead of dialing up with a terminal program and viewing ANSI graphics, you dial up using Windows95 and Netscape and access a single web server. In some isolated areas with no Internet connectivity, you could still have local web servers configured this way, with all the graphics etc., but operating as a local or regional dial-up bulletin board. As connectivity between local systems is achieved, and ultimately to the wider Internet, no hardware or software changes need be made. I regularly hear local BBS operators noting the desirability of a local dial-up connection. Great, but make it a SLIP/PPP connection. There really isn't any reason not to. You can have an internet without THE Internet, and add connectivity to it whenever you like.

As far as connection to databases and applications on your LAN, this can mean several things. There is TCP/IP connectivity beyond the web. In this issue we show how to access drives across the Internet using TCP/IP. But there is also a developing area of connecting a true Web server to databases on your local LAN. Generally, this is done with a Common Gateway Interface (CGI) script. In the Windows server arena, this is actually usually a Visual Basic program developed for the special purpose you intend. Microsoft just released Visual Basic 4.0 and it appears quite capable. For more ambitious projects, Oracle is integrating their very popular database product with a web server function. They are also producing a browser termed PowerBrowser that is fully compatible with Netscape 2.0 - right down to the Java interpreter.

As far as entering your existing BBS from the web server, we simply provide a telnet reference to our BBS, which is connected to eSoft's IPAD, and the web surfer simply clicks on it to telnet to the Boardwatch BBS. I think we will see Web server software evolve, and connections to things like the new Wildcat 5.0, MindWire, and WorldGroup become very common in the future. A kind of "superBBS" affiliated with the Web server that looks very different from a simple telnet link to an existing ASCII/ANSI bulletin board system.

As to databases, this too is an area of intense interest. The new Windows uses a thing titled the Open Database Connectivity (ODBC) specification. This is basically a concept whereby we decouple the user interface from the underlying database engine where you could have ten DIFFERENT types of application programs that all access the same database, or on the other hand, ten entirely different types of databases, all accessed from a single user interface application. I know this seems a little cloudy now, but it leads to the answer to your direct question in that IT DOESN'T MATTER MUCH ANYMORE. Develop in dBASE and add various interfaces to reach it later. TBBS uses dbase compatible databases, and you should be able to use Visual Basic to write a program to access them from the Web quite easily. And as ODBC becomes more prevalent, this will get easier. We are actually getting away from the days where you had to convert one database to another and entering a phase of universal database engines that don't care what the format is, or what the user interface is. It's great news. But it's a little hard for people to visualize right now. The earth moved. And few are aware of how far it moved. For me personally, I am growing to like Microsoft Access and Visual Basic. There were some serious problems, but VB 4.0 promises to iron them out, and I'm enthusiastic.

Good luck with your service in Spain. Please keep us posted on progress.

Jack Rickard



BROTHER DANIEL

Dear Jack,

Ooooo, Jack! That November issue was smokin' when I took it out of the mailbox. I found out why on page 14 in your response to the California "Brother". Whatsamatta? Don't want to ordain your African violets or your kitty cat?

Religious/political/tax fanatics aside, I have noticed a characteristic of humanity which may interest you. To communicate with a Frenchman, you generally need to speak French. To communicate with a child you need to speak on his or her level. To talk to infants, people babble uncontrollably. Involuntarily extending the analogy, most folks, when talking to idiots, talk like idiots themselves, returning insult for insult, matching each intellectual jab below the belt. Isn't it amazing how, when challenged with ideas or attitudes we disagree with, we naturally step up or DOWN to that level in order to combat them? It seems that in the combat, we become that which we despise.

Brother Daniel's letter stands and speaks for itself. People like that are their own punishment. Please don't waste my subscription dues on such trash.

Thanks otherwise.

Hank Wallace
hwallace@roanoke.infi.net
Hank:

Ok. I at times get a bit caught up in it all.

Jack



COMMERCIAL SERVICES

Hi Jack,

Me again, and guess what, I agree with you again. Months ago I griped about your not writing about and covering AOL. In the November issue I revive this issue with you and you respond, more or less, why cover them! I must admit, after 3 years of playing with Prodigy, AOL, CompuServe, GNN, and most if not all the rest BIG 10, I have finally realized all they wanted was my money. I spent hours on them, oftentimes more than the basic 2, 3, 5 or 10 hours per month, and got charged, on average \$3.00 per hour extra. Now, after searching my area, the best I have found, for Internet access, and economy is a local Internet provider, its called Applied Personal Computing, Inc., or quite simply APCINET, and for \$15.00 I have a non-overloaded 28.8 connection (on my end) to the net. I use Netscape for browsing, and I use Eudora for my mail, and I'm having a ball! And I am even using Win95 with PPP, TCP/IP and all that, and I sort of understand it. I'm going to stick it out with APCI, for now at least, until someone offers me a 128K SLIP connection for \$15 per month, or whatever other high speed connection I can find. Anyway, sorry for the hassle. We don't need to cover CompuServe, Prodigy, AOL, GNN, etc., because, we don't need them!

John Delaney
Reywal@apci.net
Alton Illinois

John:

About two years ago we appeared to be the only savages on the buffalo hunt and we decided to try to cover it all. Things have changed. There are now more magazines covering the online world than you can shake a stick at and even the mainstream computer press seems to have become the Internet press. We will probably continue to cover breaking news regarding large commercial services, but the regular columns on these systems are probably going away in Boardwatch quite shortly.

I share your enthusiasm. It is always a joy to find good service at a good price. I guess I've always felt I received better value from smaller companies, and it just feels good to beat the game a bit once in awhile and find a bargain.

Jack Rickard



Hey Jack..

I've been wanting to write a Letter to the Editor for a while now, but I haven't really found a good topic to write about so I'll save that for another time, but there are a few things I'd like to write you about, so here goes.

First off, Great Magazine (I wonder how many messages a day you get have those exact words? :) Let me get straight to the point now. I've been reading Boardwatch for over 2 years now, and like others have mentioned, I've noticed the decline in BBS Coverage and the Increase in Internet Coverage.. I think it's great! But.. In my opinion, why not get back into BBS coverage? I know you've probably heard this a million times but, Do we really need CompuServe or

Prodigy news? Or even MSN? They're probably great services, though I haven't tried them to find out, but I think Boardwatch should try to go back to what myself and I bet many others think gives it its unique style. You could for instance try out having a Column on Major (Well, now its really WorldGroup) instead of CompuServe, and another for some other discussion besides the Major Online Services, instead of Prodigy or MSN. They've had their share in the spotlight in BW and many other Magazines, but it'd be great to see some more Sysop/BBS Oriented Articles back in BW! I'm not a sysop myself, but one day I do plan on starting a BBS, and its actually interesting to read that type of articles. I've seriously found myself avoiding the CIS, Prodigy, and MSN columns, and going right to Editors Notes, Letters, Beginner's Luck, and the others which Boardwatch is known for! I know you've probably been considering this already, but hey, doesn't input help?

On another subject, if your still reading this to this point is, it was nice to see some Windows95 Networking coverage this month... It even convinced me to go back to exchange (Well, now I'm using Eudora until I make sure Exchange is working properly). And finally.. I just thought I would recommend a BBS that could be considered for a future Direct Dial article, its literally the largest BBS out here in New Jersey, sporting 130 or so Dialup Lines (100 are 14.4 and 32 I think are 28.8, though the Owner plans on moving all to 28.8's) It's called "Cyber/Chat" which us users either call it Cybercomm or "C/c" for short. It's my one and only choice for Internet Service, at 15\$ a month, UNLIMITED Slip - No time limits/Hours whatever, (PPP is on its way) I can't give it up... You even get a shell account, with space for a Free homepage! And this place is actually still expanding, Its currently run out of the owners house, but word has it, he's finally moving it to an office sometime this Winter. But I couldn't resist recommending this system:) You can telnet to it at bbs.cybercomm.net.

Well anyway, I think that's enough for now :)
Keith
<tornado@cybercomm.net>

Keith:

Ok. We do intend to cut down coverage of the major commercial services in favor of more technical and other hopefully more interesting topics in the future. Windows95, WindowsNT, and a whole new bevy of specialized client/server application topics head the list. I don't know if I would characterize it as "back" to anything as I don't view it as having ever left, but the big board columns haven't panned out as we had planned. I pretty much agree with your assessment.

Jack Rickard



WINDOWS95

I read your article about Windows95 with much interest. I was particularly interested that TCP/IP was included and that you thought this was neat. I thought it interesting that MSN was not required, and how you thought this was neat. I found myself agreeing with what you said about the old Trumpet Winsock. Still, I was amazed at

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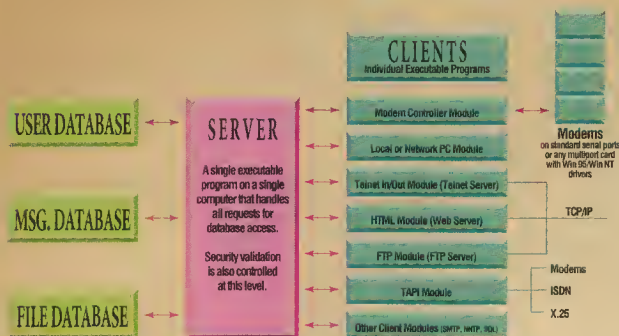
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how complicated setting up Windows95's communications was and I was amazed at how you thought all of this stuff was somehow revolutionary and easy to use!

Well, welcome aboard! There's always room for more here at the top. I've been here for months already and it's nice to see you online for the first time. Naturally, I run OS/2 Warp's Internet Access Kit, so I had a head start on you.

Rob Richter
Rochester, MN
rrichter@millcomm.com

Rob:

It is rather striking to me as well that Microsoft could suck up so much into the operating system, and it remain a configuration task of such magnitude. Yes, you had a head start with Warp, but as I recall, IT was even more of an installation nightmare.

I do like Windows 95, but we have had a terrible string of incidents regarding installation of other programs into it. It seems everyone thinks they own my machine but me. The latest nightmare, Netscape 2.0 disabled the Microsoft Internet e-mail package that comes with Windows95 PLUS. It installed its own badly mangled e-mail manager as one of the available services instead. And I can't seem to get IT off my machine, and the Microsoft Exchange Internet mail client back as an available service. I was terribly offended. No notification, advice, or option to avoid this virus-like mess. So we praise Windows95. And we war with it.

Still pass on OS/2.

Jack Rickard

YOUR NOVEMBER EDITORIAL

It is NOT unanimous. I agree with YOU. I'm currently plotting out the next addition of phone lines for my IPAD. The big boys don't have the patience to spend the time I spend with new subscribers.

Also, the death of the BBS as we know it is NOT a done deal. My BBS is as busy as it has ever been with more new callers showing up than ever before. This includes not only folks looking for Internet support but also folks who just want to be able to send email to kids in college and play a few on-line games. This wouldn't have been possible without PIMP. Thanks.

After hearing all about the death of bulletin boards, I was figuring I'd have to move some of the BBS lines over to the Internet machine. Fat chance. I'm looking at the serious possibility that I'm going to have to upgrade the number of phone lines to the BBS, increase the line count of my software, and add another multiport card just to keep busy signals on the BBS at a reasonable level.

Thanks for a great magazine.

Rob Marlowe
rob.marlowe@sanctum.com
The Inner Sanctum BBS (813) 848-6055

Rob:

We're pleased things are going well for you, and we're hearing the same thing across the country. There is a lot of confusion and uncertainty in the industry right now, ironically enough, just at the time when your callers are willing to pay a bit for access and all the techno-toys are working better than ever. I was in Orlando Florida and somewhat informally surveyed some 26 Internet Service Providers in the area. All but two were BBS operators a year ago. Most still had their BBS's in operation. But almost all of them insisted they were NOT BBS operators but rather Internet Service Providers or Internet Access Providers and tres cool. So we're seeing the same guys, in essentially the same rooms full of computer equipment, doing approximately the same thing, but with an upgraded job title and a better market. Ok. If you want to be called Internet Service Providers, I'm game. On return from Orlando, we went out electronically and sucked up everything purporting to be an Internet Service Provider. Then we purged our dupes and verified the list - the original Boardwatch formula from 1987.

And we found an interesting thing. We found some 3240 unique Internet Service Providers most of whom serviced 50 to 1200 subscribers. Nearly all were BBS operators in the near or less near past.

I guess the message is that you're on the right track. And I suppose so are we. I said nearly three years ago that the Internet would be delivered to the home by BBS operators. Well, I was wrong. It will be delivered by Internet Access Providers who WERE BBS operators a few months earlier. The primary difference here being terminology. And I think the most successful ones will use their existing dialup BBS as a customer service tool and a starting place for those new online where they can pick up the software and expertise to make the trip to SLIP/PPP connections. They'll probably also run a web site - or perhaps 30 of them for various customers.

In any event, good luck with your service. For those who are unaware of some of the specific references you make, IPAD is the Internet Protocol Adapter developed by eSoft, Inc. PIMP is the Personal Internet Mail Processor, a UUCP protocol e-mail utility I wrote myself in assembly language to connect TBBS bulletin boards to the domain name e-mail system extant on the Internet. We incidentally sold PIMP to eSoft this past May and I'm very gratefully back out of the software business. They've enhanced it rather significantly and released it under the name The Internet Gateway and E-Mail Router (TIGER). Any time a caller enters an Internet mail message, it automatically grabs an unused BBS telephone line, calls the UUCP host, and delivers the message - typically within a minute. It works pretty well and yes, the simple act of adding a function to allow your callers to send and receive e-mail worldwide can significantly enhance your BBS. Beyond all the web whiz, e-mail is still the most useful Internet function for most people.

And I couldn't agree more, customer service is how you'll win - again.

Jack Rickard

DOMAIN NAME REGISTRATION

Hi Jack..... I've been reading your magazine for two years and I find it most helpful as I strive to keep my BBS alive (running Searchlight software by the way... which is very good.... but I never see much about that product in your mag apart from their advertisement each month)

My question is this... how do you go about registering the name of your internet address so it's ????.com and not the normal complex address. I was told that there is an organization in the U.S. who now charges \$(US)50 to register it. With more & more business being done on the Internet I believe it's vital people can communicate easily with each other & an Internet address with ????.com is one way to do this.

Keep up the good work..... and know that your mag is read and appreciated as far away as New Zealand

Regards
Chris Byrnes
Wellington
New Zealand
byrnes@actrix.gen.nz

Chris:

We had a conversation about Searchlight today. You're right, they're a little overdue for some coverage and they may have some coming. To see what I mean, you might take a peek at <http://www.searchlight.com>. They are combining the functions of a BBS and a Web site in a fairly artful way. I find that I've somehow become a reversi token as well.

As to registering your .COM domain name, this is handled by Network Solutions, Inc., otherwise known as the Internet Network Information Center or InterNIC. They do indeed have a \$50 annual domain name fee effective now. First time domain registrations are \$100 and renewals are \$50 per year. There has been a lot of angst about this under the "who elected YOU the Internet" variety. Actually, it is the one centralized function that can't be effectively decentralized. When the National Science Foundation "privatized" the Internet and shut down the NSFNet backbone, they contracted this bit of database maintenance to Network Solutions, Inc. under a \$5 million contract. But the world has grown up since then. Currently, they are processing some 20,000 domain name registrations per month and many are simply frivolous - would be Internet Entrepreneurs staking out their 160 acres in an Oklahoma Land Rush style gambit for net turf in the form of domain names. The problem is, processing of domain names has slowed to anywhere from three weeks to three months to get an IP number and domain name connected to each other. That's unacceptable. If the \$50 fee will cut down on the frivolous registrations, and enhance the speed and efficiency of domain name registration, I'm all for it. In this age where you can send messages to pagers by World Wide Web, order cigars, access yellow pages, etc., the current registration process is inexcusable. I should be able to access a web site, search for my proposed domain name to find out if anyone else already has it, register it, and pay for it with a credit card. It should be active within 15 minutes at the InterNIC at least and promulgated throughout the network

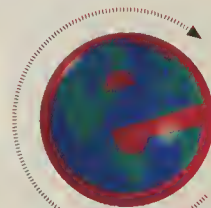
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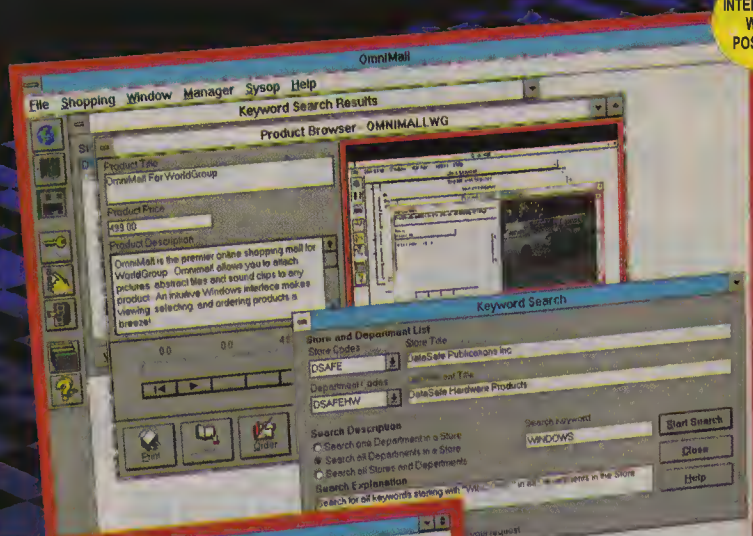
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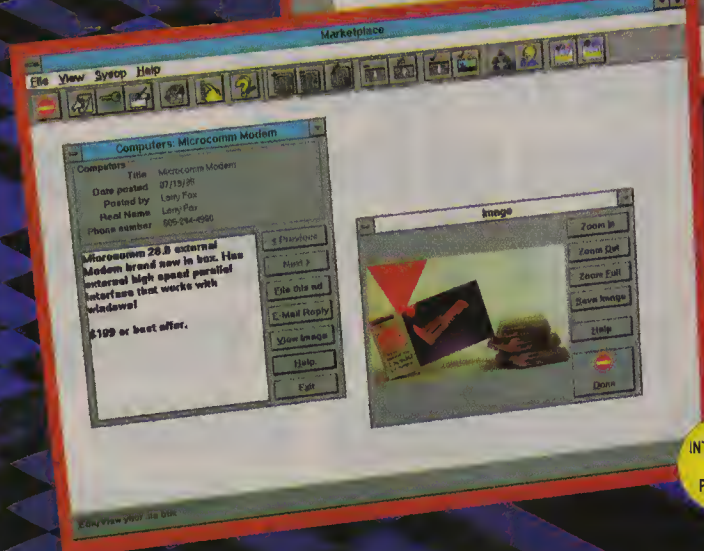
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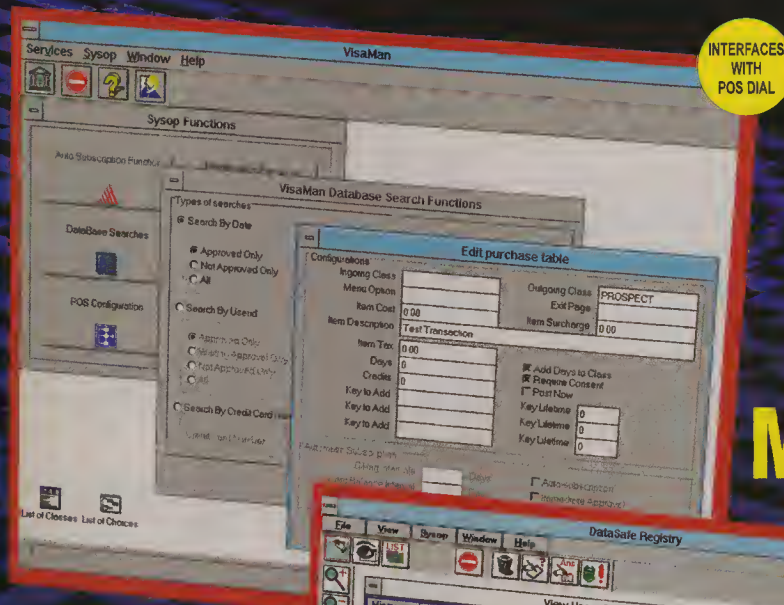
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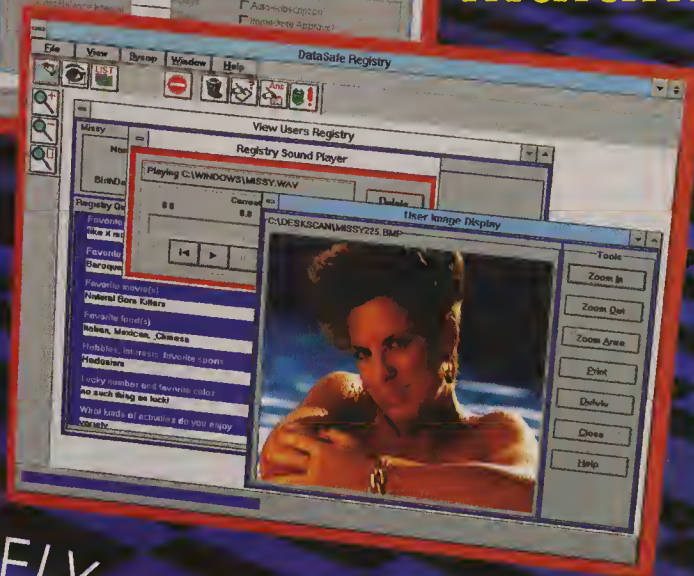


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Jack Rickard

GREAT RAG

Dear Sir (a/k/a Editor Rotundus):

Thank you for your efforts thru the years as, in my unhumble opinion, the BBS/Online world's premier scribe. Your magazine never fails to entertain and educate me. I think we, along with many others, have long shared a common dream that is now being realized with the Internet and Web Browsers. Speaking for myself, it is what I have been searching for and dreaming of ever since I first logged on (to CompuServe) as a user back in 1987. I'm still with CI\$ (barely) and thru the dry years tried many other services and BBS's.

Please keep up the good work. There will still be a place for magazines on dead trees for many years to come and when, the last one is printed, the intelligent ones (Boardwatch among the first, of course) will have long since decamped wholly to the net with their subscriber base.

My own particular business, security & market analyst/trader, is carried almost entirely thru online of one type or another and is totally based on modem delivered info. Others may have told you this before but it is my firm belief that within 10 years organized stock and commodity exchanges as we know them will have been replaced by trading thru the net. Brokers and traders are merely intermediaries whose ultimate justification is to match up buyers and sellers in any given issue or contract. What need will there be for such when the buyers and sellers can meet each other directly?

I have just a couple of minor gripes to wrap up the brown nosing! Your home page needs some attention. The "Boardwatch" graphic is cut off at the bottom 15%. I recycled Netscape several times but got the same result each time. More serious is Dvorak's column in the October 95 issue about the woman with the Gates antipathy. I well understand that with the exposure in Boardwatch she probably added features to her pages but she is obviously one genuinely disturbed woman. I don't think such poor souls need the encouragement that comes with the exposure John Dvorak chose to give her.

Finally, your coverage of CompuServe's recent rate action would have been more accurate had it included the statement "CompuServe terminates Basic Services and lowers rates on surcharged areas."

Other than that my compliments on another excellent-as-usual issue.

Best Wishes,

Mark A. Gallmeier
enigma@fortmyers.com
President,
Enigma Research Group, Inc.
(also Captain, Infantry, USA Retired)

Mr. Gallmeier:

I agree. It is indeed the best of times and the best of times. We are in some transition, and it is causing a lot of worry and confusion about positioning. I fall prey to it even here at Boardwatch. But in truth, we have all the toys we ever dreamed of online, the direct attention of the entire world, and we're all grown up now.

I share your fascination with financial markets. Exchange "floors" are already drying up. The traders can sit in more comfortable offices and do it by computer faster and easier and the London Exchange is virtually deserted I understand. I think it will follow similarly throughout all markets within two years. I guess I think there will always be a middle man, or in most cases, a middle computer, monitoring the rules of the road and buffering buyers from sellers by several nanoseconds at least. But this is a business that simply gains too much not to lunge at it. I was somewhat fascinated by the Internet StockTracker program by Virgil Corporation. We reviewed it a couple of issues ago and I use it several times per week. It is a modest little portfolio program, but it updates itself over the Internet with stock prices and volumes. You don't "logon" to squat, you aren't anywhere, and you don't do very much. Just punch a button, or schedule it to do it automatically, and it updates itself as often as you like. I still can't actually TRADE on the Internet with a few keystrokes and until we are there, with real time quotes and instant transactions, I don't think we've realized the potential. But I have collected three or four 800 numbers of companies that are offering software that DOES allow you to enter actual transactions online, and plan a story on the genre very shortly.

As to our home page, we've been looking for that cut off 15% of the screen all over the place. It's gone now. We'll try to revise it to put up an entire home page. Meanwhile, you might look at an 800X600 display size to see if that helps any, and turn off your toolbar in Netscape for a slightly wider world view on the World Wide Wait.

Thanks for reading;

Jack Rickard

BOARDWATCH HOME PAGE AND ONEBBSCON

Greetings!

I first visited the Boardwatch home page just prior to attending OneBBSCON for my second time and found the information very useful and enjoyable with the one exception, that your page display was larger than I could display or print out ;=) especially since I was trying to get the seminar schedules. Mentioned this to you in passing in the hall way at the CON. I see you still have a page that is bigger (in width) than I can display and see at one time. Grumph! I'm running a 486/33 with 16 megs of ram using Trumpet Winsock and Netscape so the system is a little older but should be adequate. ????

I like the new background you are using and the page in general is looking GREAT! Congrats to the Webmaster! Small suggestion.... In your signup form for access to the magazine, you could add two things I think would be of use: first is to allow a comment free form text entry box of say a couple lines (I would have liked to add a comment that I am a current paid subscriber to Boardwatch and enjoying another medium to access the magazine) second item is to add a e-mail hot reference on that area for an e-mail to webmaster/editor/sales/subscriptions etc. Makes it so much easier to chat back to ya!

New subject! Last year I got a questionnaire in the mail for comments about the CON and didn't send it in (My big dummy thing) Anyway, I have been looking for same such thing this year and have not received. Are you going to be sending them out this year? Just in case, I am gonna add a few comments now and perhaps more later.

Overall I once again enjoyed the CON. I thought the convention facilities were great. The organization was good and the opening show was once again a killer.

Here are the things that I noticed that could be perhaps considered for next year... (yep I plan to be there again as well)

1) Service in the HQ Hotel, especially in the restaurants was terrible. This became even more of an issue as I and many other folks that come to the CON value the networking that goes on in a lounge etc. after hours as a major part of the CON and a very valuable part of it. There is an amazing amount of business done in a short length of time in the show, but there is also an amazing amount of business and networking that occurs outside of the show itself.

This was more emphasized to me as I had Atlanta to compare it to and found things in Tampa really lacking. Part of this, I am sure is the fact that we were also spread out. I really liked the idea of being centralized last year, even with the gerbil tubes ;-)

2) The initial registration set up did not properly consider any handicap issues. I am not, but I have a close friend that is wheelchair bound and we needed to get him to the convention to register. Kicker was, he had to be registered to get any assistance with transportation that would accommodate the handicapped. Do you smell any chicken/egg problems here???

3) Towards next year. I am hearing some disturbing things about the union situation and the costs involved for the vendors and with the additional costs they may be subjected to. This has already started some discussion of whether or not to attend, and if they do, there will be a lot less promotional goodies and specials for the CON. This is of concern to me as an attendee as much as the exhibitors.

I really hope you take this in as friendly a manner as I really mean it to be. My intentions are completely friendly and intended to be constructive.

Bob Cooper
Bob@idibbs.com
Sysop: Idaho Interactive BBS
38 lines
telnet to idibbs.com
Web http://idibbs.com

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Bob:

ONE BBSCON presented 187 sessions this year. The "map" is an eight-foot long magnetic white board with a time/room grid and magnetic tags representing each speaker and session. I was rather proud that we got the entire schedule on a web page with all 187 sessions on a grid that almost exactly matched my white board using the TABLES feature described by Michael Erwin in his HTML column. Better, you could click on any session and get the full text description of the session, precisely as it appeared in the showguide, and further click on the speakers name for a full bio and contact information - again just as it appeared in the show guide. We worked on it for several days. Yes, it is wider than the screen. So was the show. We had 14 sessions going on SIMULTANEOUSLY at any one time at ONE BBSCON. And the concept of televising the sessions at night in the hotels was extremely popular.

As to comment forms - you already have the answer embedded in your question. You didn't send it in. Neither did many others. We DID receive a lot of them and I presented summaries of all of them at a ONE BBSCON Executive Advisory Board meeting at the Lodge at Cordillera in Vail this past January. We gleaned lots of interesting information, and I think it led to a better show. But one of the comments was that after attending 15 consecutive sessions of varying degrees of interest and quality, it was difficult to remember specifics for the comment sheet 30 days later. This year, we had them IN the session rooms and collected them as people left the room. They are more detailed, and we collected over 5000 of them. We're still doing the data entry, but I think it will give us a remarkably accurate picture of what attendees found useful, and what they found less than useful. It should help us dramatically improve the presentation.

We'll take the other recommendations under consideration with an eye toward improvement. Putting on a show the size of ONE BBSCON involves hundreds of details and actually we DO appreciate such comments pointing out the rough spots.

Jack Rickard

VISIBLE HUMAN PROJECT

Your mag is always a reliable source of info for interesting boards and Web sites, and the October 95 issue was no different. While looking through Babb's Bookmarks (one of my favorite columns), I noticed that The Visible Human Project was featured. Having just seen a documentary on this project, I was excited to get any additional info on it that I could. Mr. Babb went on to describe the site and commented on how the site allows you to view a human corpse from different views, specifically, cross sections. However, Mr Babb said that the data for these pictures was gathered by MRI and CT scans. I recall the documentary explaining it a bit differently. In fact, I think it said that the corpse was physically cut with a saw into 1 mm slices, and a picture was taken of these slices. This is the aspect of the project that I thought was the most fascinating of all. We've all seen CT scans, but rarely do the pictures we see of a humans

insides come from actual photos of the cross section. Very creepy.

Tom DePaul
TDepaul@aol.com

Tom:

We've heard it both ways. We were unable to confirm that the cadaver was physically sliced but it remains a possibility. It was indeed a strange web site, either way.

Jack Rickard

E-MAIL & POSTED ARTICLES

When in doubt start at the top. <G>

I figured, you can figure who this should go to. (Sorry)

There was no general e-mail access point so I shot this to you. Great Magazine, I am a subscriber.

Nice Web page.

I was searching on Germany and Internet for an article you ran about a big BBS that was providing Internet access in Germany. Couldn't find it. You seem to post only, or mostly, the columns, and letters to the editor. I did learn to use the search feature in Netscape so it was a learning experience. I would be nice to have all the articles in the magazine text posted if possible.

Other than that, a great effort.

BTW- I was looking for a German access point for a friend of mine in Luebeck Germany. Was such info in the magazine, that you can remember? I have all my hard (dead processed tree fiber) copies.

Thanks,
Have a great day.
And keep up the good work.
Brian
bmwbrian@omni.voicenet.com

Brian:

I would say you still had some learning to do. Indeed, we have the full text and graphics f all Boardwatch Magazine articles for the past year on the web site, complete with a keyword search function. I found the article on the BBS in Germany in about 12 seconds. It appeared in our April 1995 edition in the Direct Dial section. Dr. Klaus Langner operates CyberCity BBS and we detailed his direct dial number at 49-241-21130 and his ISDN line at 49-241-21170. He actually has access points across the country. Notable in the article was our 56 kbps ISDN link to his ISDN line in Aachen Germany, which was totally flawless. I've learned he's since set up a web page at <http://www.cybercity.de>.

I don't know where in Germany Luebeck is and you failed to mention a local area code. Here are some Internet Service Providers in Germany. Between CyberCity and these, you should be able to get your friend connected. Here in the U.S., BBS operators are relatively easily becoming Internet Service Providers. In Europe it is often not so easy

with more restrictive regulations and more centralized telephone oligarchies, but clearly Langner is doing it.

Good luck.

Jack Rickard

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Geschäftsbereich Xlink,
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NET Network Expert Team GmbH
info@n-e-t.de
<http://www.n-e-t.de/>

HAWAIIAN BBS

I live on Oahu, Hawaii, and I read your article on the Hawaiian sovereignty BBS. I feel that because you are so removed from the situation, you do not have all the information you should.

First, Hawaiians do have many legitimate complaints against the Federal and State governments. The state is leasing Hawaiian lands, but has never paid a cent for over 50 years.

The thing I really object to is the way they are going about righting these injustices. The biggest sovereignty group in Hawaii is lead by "Bumpy" Kanahele. He is the leader of the group that calls themselves "The Nation of Hawaii". He has a police force dressed in black Battle Dress Uniform, similar to that used by the U.S. military. These police are armed with 9mm, and are not responsible to the US government and do not honor the US Constitution. This group has send threatening letters to state and federal court judges holding them "personally responsible" for war crimes against The Nation of Hawaii. This group is not required by the state government to have state license plates. Frankly, they have the Hawaii State police force scared.

I am scared also, by a group of armed soldiers that do not honor the Bill of Rights and

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the Police will not stand in their way. They have committed several violations of state and federal law, but get away with it.

This is not the only sov. group around. The Hawai'i Sovereignty movement is as fragmented as shattered glass. That's too bad. They might be able to accomplish something if they worked together. Unfortunately, most of the leaders of the movement are only in it to get a profit and popularity.

I am not familiar with this particular BBS that your article covers, but I thought you should have all the information if you are going to continue the quality of the writing you have shown so far.

Thank you for your time,

Rob Braun
rbraun@lava.net

Dear Rob:

Thank you for sending this other side of the coin, though it's rather vague as to how the Hawai'an Nation guys have violated state and federal laws and failed to "honor the U. S. Constitution." Many laws richly deserve to be violated, and blind obeisance to the Constitution is not a prerequisite for political merit. Even the Bill of Rights takes a back seat to common-sense justice; yelling "Fire!" in a crowded theatre is not a protected form of free speech. In principle, I think it is a fine idea to hold SOMEBODY "personally responsible" for crimes against the people; why not the judges who have wide latitude to interpret and void insufferable laws?

You paint a portrait of what could be the mainland's future. When the State pushes citizens too hard, they push back. This is a desirable consequence, but it has dangerous side-effects. Once people start pushing they tend to push in all directions, like a gas released from pressure. (Perhaps sociologists should study Newtonian physics.) Revolutions invariably replace one group of bullies with another, making the whole process of "reform" seem futile. But I believe it is only fair to keep turning the compost heap, letting each worm have its day in the sun. Also, the process of enriching the soil of society is hastened by agitation.

At ONE BBSCON in August, I heard several (admittedly tipsy) sysops talk of "manning the barricades" against the swelling tide of net-cops who snatch BBSs with blithe disregard for the rules of search and seizure. Some of these sysops claimed to be installing steel walls in their equipment rooms. One spoke of his shotgun with disturbing fondness. Perhaps I was tuned into the fantasy-chat channel; but perhaps not.

I don't recommend armed resistance. The cops own the dynamite, for one thing. But more to the point: violence tends to be indiscriminate, as the fire-bomb threats against Larry Kwiattkowski's BBS and personal safety demonstrate. I would hate to see sysops shooting sysops over political correctness (though one might excuse mayhem committed during debates between WildCat! and TBBS operators).

I said in the article that "cyber-natives" could learn from the struggles of other indigenous populations. Pulling together instead of fragmenting into tiny, vulnerable enclaves is one

such lesson I hope we learn. Your letter indicates that the Hawai'ian nationalists skipped that chapter. Following only leaders who eschew self-aggrandizement is another lesson, one we might learn from Gandhi.

Best wishes,

David Hakala,
Editor at Fault



FCC TARIFF 72(?)

Dear Jack,

A few months back you ran a story about a sysop in Tx. in a town called Mexaca or something similar. IAC, the gist of the article was that this sysop knew of an FCC tariff that, when mentioned to an ISP, caused your monthly nut to be cut just about in half. Have u verified this as fact? I e-mailed this sysop and got no response! any info would be greatly appreciated. I know that certain ISP's that advertise w/u probably wanted the kibosh put on this one but I am no Rockefeller either!

Tnx,

Kevin Keefer
kevink@bizopnet.vivanet.com
PS. I could kick myself for not renewing my B-watch subscription! Gotta do it this wk. ttyl.

Kevin:

There are two components to the typical leased line connection to the Internet. The first is the Internet access service - the port connecting you via TCP/IP to the Internet. The price of this varies widely.

The second component is for the T1 leased line from your office or location to the office or location of the Internet service provider. This line is usually leased from the telephone company. Often, the Internet provider handles the arrangements for the leased line between locations as well by arranging with the telephone company for the installation of this line. They pay the monthly telco cost and you pay them a fee that covers both the leased line and the port charge.

In the event that you find yourself in a position where you must arrange your own leased line, in many areas there are several price levels depending on what the line is used for. This is a by-product of the regulated monopoly nature of our telcos. They love to charge for services based on what you USE the line for, rather than on a basis of what it costs them to deliver it. The FCC tariff referenced is for data use where data would normally transit state lines. Any connection to the Internet inherently qualifies under this tariff because you are routinely exchanging data from locations outside of your state. And it is indeed normally at some savings over a similar line linking two office locations in the same city.

I do hope this helps.

Jack Rickard



CONTENT

I regret to say that I'm increasingly disappointed with the content of most of your columns.

You personally talk tough about, say, aol, and correctly point up some deficiencies of that service, but your aol columnist, and those writing about the other services may as well be p.r. hacks regurgitating press releases.

To stick with my aol example, why doesn't your writer actually do some reporting. He could, for instance call aol and question them about the continuing appalling state of connections that leave users around the country in a perpetual state of getting knocked off the system or not being able to get back on. Just last night I lost my friend 3 times as she got punted from the system. This week I've had to reenter my flashmail password because the server, inexplicably, refused to recognize it anymore. You know the litany.

But instead of following up on the problems—and they are not all technically related—your people just go ga-ga over the the latest system offering. I should think that you, of all people, would offer up some incisive and powerful criticism—and you do in your own writings—but they are not forthcoming from the columnists.

It isn't enough to have you at the front end and Dvorak at the back when what is sandwiched in between is too often flackery. Instead of devotees of the services, why don't you pony up some money for some reporters and some critics.

Regards ...
nicmartin@aol.com

Nic:

You want us to pay them money? I suppose its an idea. We'll kick it around. Do other magazines do that?

It doesn't sound like you're content to me.

Jack Rickard



WWW SITE ARTICLE(6/95)

I really enjoyed your article on building your own WWW Site, especially the part guiding your choices. I plan to construct a site based on the article and wonder if you feel there is sufficient justification to purchase Windows NT now that Windows 95 is being delivered. Is there a good reason to continue with Windows NT and save a few bucks?

Thanks and keep up the good work.

Morris Camp
mgcamp@foley.gulf.net

Morris:

Actually there is. I share your enthusiasm for Windows95 for the desktop. But a server needs to handle multiple incoming requests for files simultaneously. There were some compromises in the Win95 kernel to accommodate some backwards compatibility issues with Windows 3.1 applications among other things. Windows NT server edition has a much stronger pre-emptive multitasking kernel and is simply better able to handle the loads required for a Web site. You CAN of course operate a web site under Windows95 and indeed, there is a web server software program that works more or less under Windows 3.1. But NT is much better suited under heavier loads.

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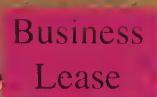
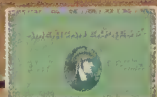
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Further, WindowsNT offers several scalability factors that Windows95 simply doesn't. Most importantly, you can throw hardware at the problem with WindowsNT if you find yourself incurring greater success with your web site than you expected. It supports multiple CPU's for example. This will likely become more of an issue with the quad processor P-6 chip systems from Intel coming next year. Windows NT will just handle it and take advantage of these larger PC architectures. Additionally, we are seeing some programs like domain name servers, SMTP/POP3 servers, etc. beyond simple web service that currently are only available for WindowsNT version 3.51 or later. We are very bullish on WindowsNT as a server platform, and Windows95 as a caller or desktop solution. Windows95 is typically \$89, while NT server is usually more in the \$699 range. They're probably appropriately priced in a relative sense.

Jack Rickard



LIFE

Dear Jack -

I love your magazine; it's the only must-read on my monthly list. I especially enjoy the reader letters; they are virtually unique in mainstream magazine publishing. A few comments on your web site. Obviously, it is excellent ...it sets a standard, a HIGH standard.

(ok, but where's the "but"?) But ...I can't seem to access "Babbs Bookmarks." And a few of the other articles are very difficult to pull up. Have you become a victim of bandwidth crunch? Perhaps you could make the articles less interesting or, at least, make the writing less crisp, less engaging.

I don't subscribe to the magazine, because I like to get it on the news-stand, rush home, and cancel all my appointments. Turn on the answering machine, pour some coffee ...and immerse myself. And I like the ads a LOT! Any chance of bringing some of them into the online version? Regarding your 100th issue: I'm not sure what you're doing right EITHER, but keep it up!

nedfagan@spacestar.com

Ned:

We have a 1.544 Mbps T1 line to our office. I am not certain what bandwidth issues are at play here. We get a bit of traffic, but the entire system seems to be if anything in the "overkill" mode at this point. We have an ad list right now quite similar to that in the back of the magazine, but with hot links to the web sites of some of our advertisers who have their own home page. This looks like the most powerful way of bringing our advertisers into the web site and at the same time allowing them to present more detailed information that they can change at will. We are still looking at some minor enhancements to this, most likely a kind of random icon function allowing you to access an advertiser directly from the editorial pages. I don't picture us in a Prodigy style interface, but we do hope to improve it.

We're pleased we've made your reading list.

Jack Rickard

SEXISM

Roger Casselman is a colleague of mine and a subscriber to your magazine. I was using Boardwatch for some research I was doing, and was offended by the attitudes I found. The following is my response.

I'm not sure who was responsible for the TELEBITS article reporting the Boardwatch 100 Readers' Choice Contest Results in the September 1994 issue, but whoever it was made some mistakes. No, there were no typos, no inaccurate data, no misconstrued facts. The mistakes were made when the writer, no doubt attempting to be colourful, laced the article with biased language and condescending comments.

Referring to the female response group of the BBS contest as "the ladies" and again as "the gentler persuasion" is simply not acceptable. Need I remind you that you are referring to your peers and colleagues? And later in the paragraph you ponder why fewer women are BBS users, "since dialing a modem requires little in the way of heavy lifting." I fail to see the logic there. I suggest to you that bullying and mocking women is not effective in encouraging them to try BBS or any other new technology. Language and comments such as I read in your magazine are components of the obstacles that women are surmounting in their drive towards equity on the information highway.

Emily Murray
Health Canada
Halifax, Nova Scotia
Canada

Emily:

They weren't mistakes. They were intentional. They had neither the intent, nor I am confident, the effect you accrue to them, but they were intentional. They in no way qualify as mocking or bullying, and I would disagree that they pose any obstacles to anyone in getting online.

Holding a particular political view does not qualify you to deem what is acceptable or non-acceptable in the use of language. It may be either acceptable or unacceptable to you personally - a pretty small universe of one. If we have actually reached the point where your narrowly politically correct sensibilities are offended at the term "ladies", we have again reached some new high water mark in the intellectually bovine mooings of the masses.

In answer to your direct question, I wrote that article and made those references. I have no vested interest either in encouraging or discouraging the use of online technology by women specifically. We do find the statistical breakdown interesting over time. But I doubt I personally have any impact on whether or not a single "lady" chooses to employ this communications medium or not, however I might refer to them.

Jack Rickard



WINDOWSNT FOR INTERNET SERVICE PROVIDERS - NOT

Jack,

I've been noticing a very strange and frankly quite disturbing trend developing in the ISP

world. It has something to do with a product called Windows NT.

Basically what I and others are seeing is a flurry of people scrambling to set up an "ISP" using Windows NT. Apparently people believe that since Windows NT is "powerful", it must be good for running a service provider (a mistaken assumption). And they believe that since it has a GUI, any Joe Blow can become an ISP without even having to know that a keyboard goes "keys toward the ceiling".

A letter to the editor in your August 1995 issue sparked my interest in investigating this phenomenon further. In "ISP on a shoe-string", John Foster apparently believes that because he can set up Remote Access and run a HTTP and SMTP server that he is suddenly a full blown ISP.

Since we use (and I administrate) Windows NT servers where I work at my day job, I am aware of a number of very serious problems with using NT as an ISP server. I proceeded to send off an email to ask John how he managed to get around these problems.

After 10 (!!) days, my message was bounced back, apparently because of a mailer configuration error.

This just confirms my suspicions that Windows NT is drawing individuals into ISPism, that really shouldn't be toying with this kind of stuff. Windows NT appears to be an "easy solution" but it's not. Basically it makes something that is fairly complex and involved, LOOK easy. I believe therein lies the danger.

This thread has been heavily discussed on the various ISP mailing lists, and the consensus was, if you are not willing to bite the bullet and learn something new (such as Unix), then you really should not become an ISP.

Being an ISP requires dedication, a fairly high level of technical knowledge, and lots of time. If you can't overcome Unix phobia, then there is absolutely no way you are going to be able to overcome other, more complex problems.

There is a lot more to running an ISP besides just administrating the dial-in box. What is John going to do when someone wants to buy a leased line from him? Windows NT's fancy GUI isn't going to help him configure his Cisco/Morningstar/Livingston router. And Windows NT isn't going to do his routing and subnetting for him. In all likelihood, John is going to be totally lost.

Those people who do manage to pull off a very basic level of internet service providing using Windows NT, will in all likelihood very quickly outgrow the product and its numerous limitations.

Of course, perhaps I should not be so hard on Windows NT. After all, it's the new kid on the block, and hasn't had as much time to mature as Unix. Wait maybe 5-10 years for it to mature and then Windows NT may actually be up to par with Unix...

I know the contents of this message basically flies right in the face of the image your mag-

OUR FALL LINEUP

Planet Connect is now making it more and more profitable to operate a BBS. Several new data services are being added this fall to the Planet Connect lineup that will bring you many new users and a new look.

The three major on-line services are enjoying record setting growth, by offering quality data services to the huge number of new on-line users that are constantly hearing about the benefits of going online.

With the new data services of Planet Connect, your BBS can now offer a rich, real-time, quality group of services that will make your BBS competitive with other major on-line services.



UPI NEWS AND PICTURES

Now your BBS can offer real-time news and information from one of the best known information providers in the world. UPI reports the national news as it happens and we transfer it to you via satellite. The complete text and pictures from UPI will give your BBS an image based system that will draw in a huge audience of new users.



STOCK MARKET AND FINANCIAL DATA

Surveys have often proven that financial data is number one on the list of data services that BBS callers are trying to find. Your BBS can now offer data from the major exchanges with hourly updates and closing prices. This service is very reasonably priced and allows a variety of display methods.

IBM	85 1/2	CBRL	22 1/8	EDS	44 5/8
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ACCU-WEATHER: THE MOST ACCURATE AND VISUAL WEATHER ANYWHERE.

Now your BBS can be the weather information provider in your community. Accu-weather is the number one provider of weather data to the major on-line services and 200 of the top TV stations. By receiving a constant series of updated weather graphics, your BBS will be used by many weather watchers.



DELIVERY AT 128K BITS PER SECOND.

All of these new data services can be received with our new 128K data satellite data delivery system.



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azine has been painting of Windows NT, so I'm really not expecting this letter to get published, and I wouldn't be surprised if I don't receive a reply to this message either.

But I would be thrilled if I received any response, even a "I disagree with everything you said. You are a raving idiot. Windows NT is god and Unix is the devil, and you are the devil's servant etc. etc." because it would mean someone is actually listening :)

Dan
root@sasami.anime.net

Dan:

Sounds like some pretty predictable UNIX defending going on there. If I understand you correctly, the consensus among ISPs running UNIX is that UNIX is the only way to do it, and in fact, anyone attempting to use anything else is doing a bad thing.

In truth, I think WindowsNT makes a great platform for running a Web site. We are starting to see some useful e-mail SMTP/POP3 agents just now coming to life. But it probably doesn't at this point qualify as a platform to "run an ISP" from in most respects. Mr. Foster has set up a small 256 kbps ISDN link from Chicago to a rural area, and I think is having a grand old time setting up service for himself and a few friends in an area not otherwise served. If it has a few jerky starts and stops, THAT would indeed be a new experience with Internet Service Providers?

On a larger scale, I don't think UNIX is necessarily the be all and end all. I'm seeing a new breed of ISP that is using UNIX, WindowsNT, DOS programs, terminal servers, hardware, and about anything else kludged and cobbled together in some gawdawful piles that do seem to more or less provide Internet services. And purists, of UNIX or other varieties, are becoming rarer.

But I won't discourage you. You do have the true light and the true answer and anyone who doesn't think so is condemned to eternal damnation forever and ever amen.

Hopefully, WindowsNT will mature and tools will become available for it to perform most any task. It hasn't been released in useful form for but a year at this point. Give it a chance.

Jack Rickard

One Word - Impressive

I would like to commend you on a great magazine! Boardwatch gave me so much information in just one issue, that I wondered how much I have been missing out on since this is my first issue. I run Mip Online, a local BBS powered by Searchlight software in Cleveland, Ohio, along with a friend, and the information regarding Bulletin Boards, and the Internet was phenomenal! We have also started our own Electronic Magazine, Crushed Ice Internet, and all the info is so very helpful in discovering what exactly is new, and exciting on the Internet, and the online world. Thanks again for such a great magazine!

Dan Plato
plato@en.com
Sysop - Mip Online
Editor - Crushed Ice Internet -
subscribe@mipper.nacs.net
<http://www.en.com/users/plato>

Dan:

Pleased you found it useful. Good luck with Crushed Ice Internet.

Jack Rickard

Jack,

You were right.

My letter in the August 1995 issue was written before my home page was up and I saw Win 95 at PC Expo.

I still think that Win 95 is a Pentium program. Sure, you can squeeze it in a 486DX66 with 8 megs, but Pentium users with lots of drive space and 16 megs will get the most use out of it. That was the problem with Win 3.1. It really didn't fly until 486's were standard.

It may work out, but people have to use it without problems. If they start losing sound on DOS games, Microsoft will get the blame. It is long overdue, however. I'll be waiting until the next version, though. Let other people suffer with the bugs.

The Web is amazing. Even with lynx, you can do things that you can't do elsewhere. I'm really impressed with what you can do. My page is at <http://www.tiac.net/users/gilliard> It's filled with political opinions and ideas I would have real problems getting into print for space reasons alone. I can have a voice without a fight.

You aren't alone in using Xywrite. Bill Buckley does also. That's something the two of you have in common.:-) I've liked Ami Pro, but use Word 6.0 with few complaints.

While you may not have the glossy design of a Smithsonian, you have better columns than almost all computer magazines. I'd rather have the latter. Glossy design is a dime a dozen.

Never afraid to admit when I'm wrong,

Steve Gilliard
gilliard@tiac.net

Steve:

Well, actually we're quite falling in love with Windows95, and yes, I'm using Microsoft Word now as well. Tell Bill Buckley to get with it - the Luddite anyway.

Pleased we've made the trip on your end.

Jack Rickard

STARTING AN INTERNET SERVICE PROVIDER

First of all I need to commend you for such a nicely done magazine. I honestly couldn't put it done for a few days. I'm very new to BBS's and the Internet and your magazine really

educated me on several things I wasn't familiar with. I can't wait for next month's issue.

I've been toying with the idea of becoming an Internet service provider through a BBS (there is only one other provider in this area). And after reading "Boardwatch" I want to make a go of it more than ever. Problem is, I'm a novice at best when it comes to computers and I know even less at BBS's or the Internet. So I hardly know the first thing at starting any service. I've already contacted one phone company about leasing a 56k line. Their price is something I feel is reasonable and I could afford, but what else do I need? Should I have special hardware or equipment other than my PC? Would a consultant in my case help?

I'll just finish this by swaying that your magazine is by far the best one I've read on the Internet. Keep up the good work!

PBoyd62332@aol.com

PBoyd

I do not normally take on the role of discouraging anyone from doing anything. If you can envision it, you can do it. But I would note that the barriers to entry in the BBS/ISP world are increasing. It has become more technically complex, encompassing a number of areas including dial-up modems, PC's, TCP/IP protocol, router configurations, domain name configuration, mail server maintenance and configuration, etc in a technical sense. It is a competitive market requiring some business and marketing savvy as well. And your main role will be to provide technical support and customer assistance to an enthusiastic but not necessarily technical subscriber base. So technical skills ARE probably required. If you don't have them, you will certainly need to ally yourself with those who do.

Then too, there are costs. You can start a BBS for less than a thousand dollars. But it is not unusual today to see startup ISP's investing \$20,000-\$30,000 in what is considered very much a shoestring startup operation.

It sounds like you face a fairly enormous learning curve. I'd put my efforts in getting on the top side of the learning curve before making the leap.

Good luck

Jack Rickard

HoloNet Provides High Quality and Reliable Internet Service for All of Your Internet Needs

HoloUUCP Service

UUCP Service provides Internet E-Mail & USENET news for BBSes and LAN e-mail systems. E-Mail and News is automatically exchanged based on a schedule that is convenient for you. Custom Domain Names (compuser.com)

and your Internet address from personal and company e-mail.

HoloIP Service

IP service provides Internet access for Internet for individuals and businesses. Using HoloIP, you can access the World Wide Web using graphical front-end programs such as Netscape and Mosaic. HoloIP service is available nationwide through a local network with speeds up to 28.8kbps.

HoloWWW Service

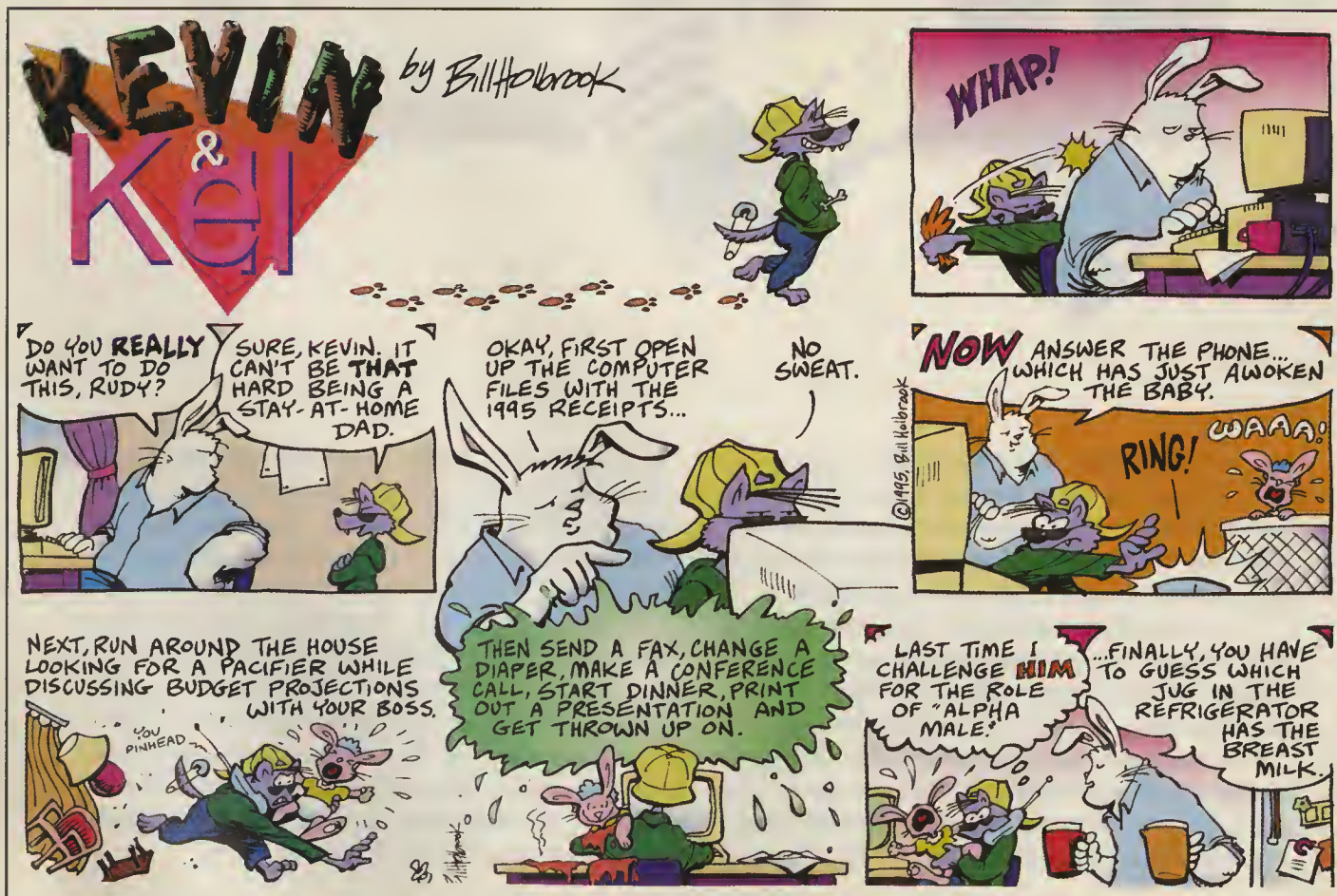
WWW service enables companies and individuals to publish WWW pages on the Internet or intranet. Web pages are easily uploaded to HoloNet's servers. You do not need to buy a dedicated server or any other hardware. HoloWWW provides a fast, easy and effective solution for companies and individuals to enhance their presence on the Internet.

HoloNet Dedicated IP Service

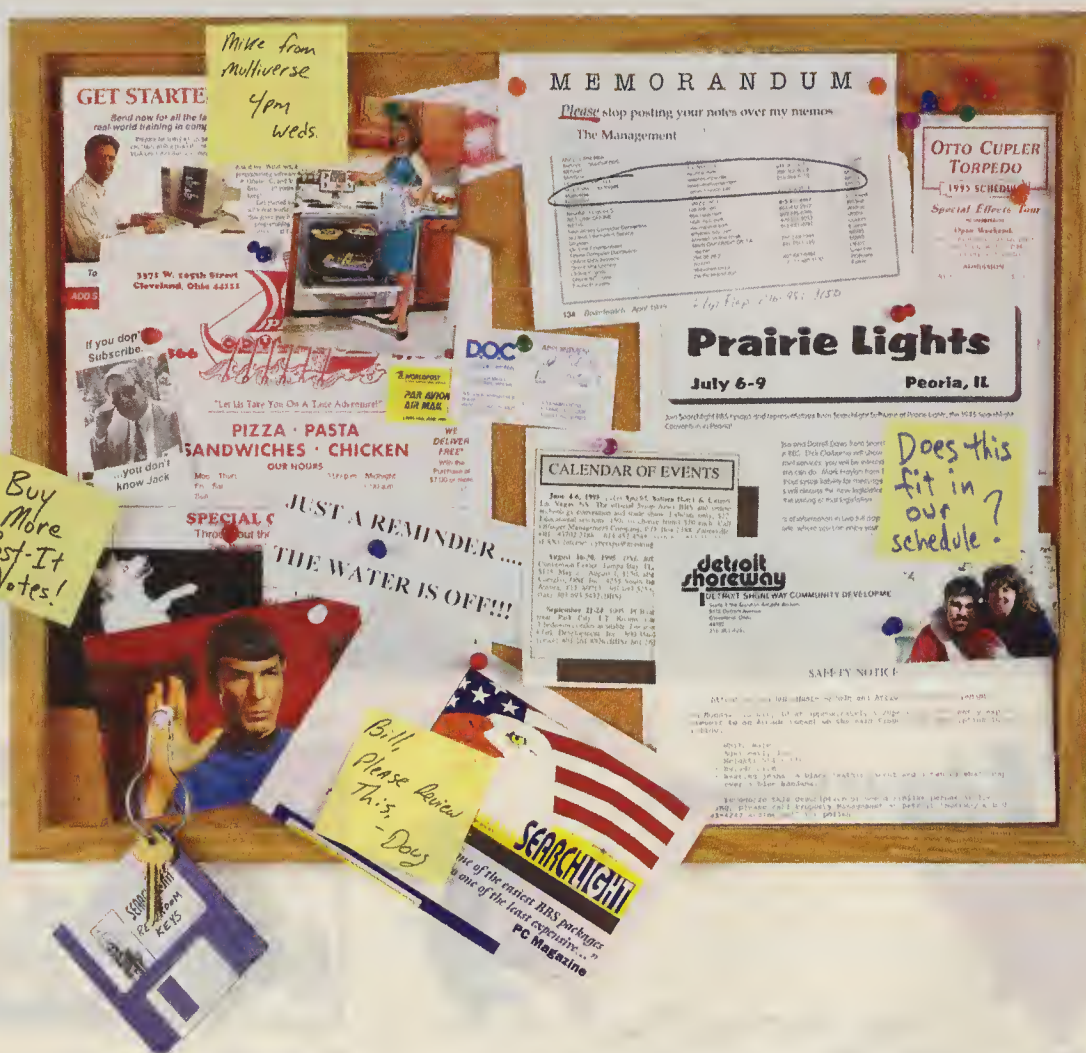
Dedicated IP service provides a permanent connection to the Internet. Dedicated IP service is available nationwide. Bandwidths range from 56K to T1. With a dedicated connection to the Internet, people can connect to your system 24 hours a day, 7 days a week.

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voice: 510-704-0160 • fax: 510-704-8019 • e-mail: info@holonet.net • url: <http://www.holonet.net>

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If you can use this,



A successful bulletin board has to be easy to use. Although the one pictured above is about as user friendly as you can get, the manufacturer left out a few of the key features you might need to get up to speed on today's information autobahn.

At Searchlight, we help you bridge the gap with BBS software that puts the emphasis on "easy". Our built-in GUI gives your callers the kind of intuitive interface they already understand. Information browsers make it easier than ever to select, view and download messages and files. Because we use the non-proprietary RIPscript protocol, callers don't need a special client program to call your BBS. They can

use any RIP or ANSI compatible terminal. And Searchlight is the world's only BBS software that gives you a local RIP interface—so you can see and use graphics on *your* computer (or any computer on your LAN).

But don't let our good looks fool you. Unlimited message and file databases, seamless Internet compatibility and a built-in DOS doorway are just some of the features that make Searchlight powerful BBS software. And Searchlight supports RIPscript 2.0, the new multimedia language from TeleGrafix that lets you incorporate JPEG images and digitized sounds into your BBS quickly and easily.

you can use this.



Since running a user friendly BBS system shouldn't be hard to do, Searchlight makes your job easy, too. From a simple install program that automatically configures your modem, to mouse driven Sysop tools and menu editors, you can set up a custom BBS in just minutes. If you need help, the best technical support in the industry is just a phone call away—and it's *always* free.

We even make it easy to try Searchlight. Our fully functional test drive does everything our regular product can do—we even include our complete manual on disk. To get your free copy, or find out more about Searchlight, call us today. And let us start making life easier for you.

info@searchlight.com

Single line	\$99
3 lines	\$179
10 lines	\$299
Unlimited	\$399



SEARCHLIGHT

6516 Detroit Avenue Cleveland, Ohio 44102

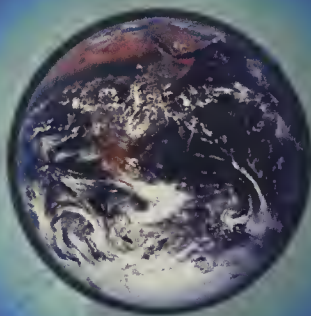
800-988-LITE

Voice: 216-631-9290

BBS: 216-631-9285

Fax: 216-631-9289

TELEBITS



HOLONET OFFERS NATIONWIDE FRAME RELAY

Dedicated IP service using frame relay technology is now available from Information Access Technologies' HoloNet division, in speeds ranging from 56 Kbps to full T1. Prices begin at **\$450** per month for nationwide service and **\$250** per month within certain areas of California. Contact: Information Access Technologies, Inc., 46 Shattuck Square, Ste. 11, Berkeley CA 94704; (510)704-0160 voice; (510)704-8019 fax; <http://www.holonet.net/holonet/dedicated.html> or <mailto:info@holonet.net>

U. S. ROBOTICS ANALOG/ISDN MODEM POOLS

Branch offices can now install 8 or 16 port modem pools incorporating U. S. Robotics' I-Modem technology. I-modem products automatically use the highest connect speed and method available – analog at up to 33.6 Kbps, Switched 56, or ISDN at 56 or 64Kbps. The modem pool can therefore accommodate ISDN callers and mobile callers who typically don't have access to ISDN lines. List prices are **\$10,995** for an 8-port system or **\$16,995** for 16 ports. Contact: U. S. Robotics Inc., 8100 North McCormick Blvd., Skokie IL 60076; (708)982-5010 voice.

eSOFT OFFERS WEB SERVERS, ASSUMES DEVELOPMENT OF WIP

"Our customers will be able to write one check for everything they need to set up a complete Internet site," promised Phil Becker, eSoft Inc. president. The company's Internet Protocol Adapter (IPAD) already integrates a router, terminal server and an Internet client/server software suite. Now customers can add a pre-configured web server. High-speed, dedicated leased Internet connections are also available through eSoft.

eSoft also announced that it will take over development and marketing of Durand's DC-Term, a communications program that supports the Windows Interface Protocol (WIP). WIP allows Windows-based client/server interfaces on conventional BBSs. The protocol will be incorporated in

TBBS v2.4, due out next year. DC-Term will be renamed "WIP Navigator." Becker plans to make the program available free of charge, as the WIP protocol specification already is. "We believe that WIP is the protocol our industry has been waiting for," he said, "and we are assuring its availability to everyone."

Contact: eSoft Inc.: 15200 E. Girard, Ste. 3000, Aurora CO 80014. (303)699-6565 voice; <mailto:sales@esoft.com> or <http://www.esoft.com>

ZIFF-DAVIS FREE PERSONAL NEWS SERVICE



Sifting through multiple sources for interesting news items is a daily chore for many Internauts. Ziff-Davis Interactive (ZDI) now offers a free web-based "clipping service" that dishes up the news items you want from a single page. ZD Net Personal View is available to all who register (name, e-mail address, company, occupation, etc.) on <http://www.zdnet.com> — ZDI's ZD Net/World Wide Web Edition. Up to eight industry categories can be specified, and up to 15 keywords can further focus the automatic daily search. News is drawn from *PC Week*, *MacWEEK*, *Inter@ctive Week* and other Z-D publications, as well as *Newsbytes*, *Business Wire*, *PR Newswire* and other sources.

FREE: 99 TIPS FOR DIRECT MARKETING

Yes, you need them – we all do, so I ordered a copy for our office too. Mirbach & Co., Inc., a direct response marketing and advertising agency that has specialized in computer-related products for over a decade, offers a free copy of its “99 Tips for Successful Software Direct Marketing” brochure to anyone who asks. Get it, even if you’re not in the software distribution business. Of course, you’ll be added to the firm’s mailing list; probably a good place to be. Advice ranges from how often prospects (including customers) should receive direct mail to selecting a printing company. Good advice even appeared in the press release announcing this brochure, like how to increase revenues from mailings that pitch products which cost less than \$50; the disappointing effect of offering premiums for phone orders; how long a direct marketing letter should be; and what the most frequently read part of a direct marketing letter is (that, of course, is where you should put your strongest selling point). Contact: Mirbach & Co. Inc.: 301 Riverside Ave., Westport CT 06880; (203)221-5200 voice; (203)454-2739 fax; mailto:bill_mirbach@j-ccmail.ccmail.compuserve.com

WEBSITE PRO OFFERS SECURITY

O'Reilly & Associates is adding Secure Hypertext Transfer Protocol (S-HTTP) and Secure Sockets Layer (SSL) to its popular WebSite web server software for Windows NT – the software we use at **Boardwatch**'s web site with eminently satisfactory results. Author Bob Denny's implementation of SSL offers a stronger random number source than the recently cracked Netscape Commerce Server. “Its design has been discussed with expert cryptographers,” said Denny, “and the implementation has been validated.” WebSite Professional also incorporates Terisa Systems' Secure Web toolkit. WebSite Pro has been upgraded from version 1.0 with WebSite Application Programming Interface (WSAPI) with enhanced logging, post processing and other features; the server side now supports static HTML documents which include programs. Pricing has not been set yet. Contact: O'Reilly & Associates Inc.: 103 Morris Street, Ste. A, Sebastopol CA 95472. (800)998-9938 or (707)829-0515 voice; (707)829-0104 fax; <http://www.ora.com>

WEBWERX TURNKEY WEB SERVER



Beyond 2000 Systems has introduced WebWerx, a \$9,995 turnkey

web server system including hardware, Windows NT-based software, custom web pages and technical support. The system comes fully configured and loaded with the customer's initial 20 web pages, ready to plug into the Internet. The server machine is a Pentium 100. The server software supports e-mail, image maps, forms handling, web-wide text searching, scripting, password security and the ability to incorporate CGI scripts. The system also tracks usage for the various pages. HTML editing tools are included, along with a clipart collection and the Microsoft Office Professional suite and Enhanced Mosaic browser. Contact: Beyond 2000 Systems 1050C E. Duane Ave., Sunnyvale CA 94086. (408)774-1223 voice; (408)774-1266 fax; <http://www.beyond2000.com>

REALAUDIO SERVER BETA AVAILABLE FREE

Want to sing to the Internet from your desktop Windows 95 or NT machine? Progressive Networks has released the beta version of RealAudio Personal Server, software which enables individuals to serve up real-time audio on demand from their personal web pages. The Personal Server supports one local audio stream and two external streams. The RealAudio Encoder used to create audio files is also available free of charge. The first 10,000 registered beta testers will receive free copies of the \$99 final version. Get your copy at <http://www.realaudio.com>. Progressive Networks: 616 First Ave., Ste. 701, Seattle WA 98104; (206)447-0567 voice; (206)223-8221 fax; <mailto:info@prognat.com>

MOTOROLA CUTS ISDN TA PRICES

Echoing the price wars of the modem business, Motorola ISG Transmission Products Division has cut the prices of its external and internal BitSurfr ISDN terminal adapters by up to \$120. The external model now lists for \$375, while the internal card sells for \$445. Both sup-



port ISDN 2B+D for connect speeds up to 128 Kbps. The products are available through retail stores; call (800)766-4883 to locate a dealer near you or hit <http://www.mot.com/MIMS/ISG/Contacts/>

FREE WEB AD FOR YOUR BBS

VersaNet Intl., Inc., a web services provider in Virginia, offers free one-page web ads to BBS operators in exchange for sysops' posting of reciprocal ads about VersaNet's services on their boards. The cross-marketing offer seems rather popular; dozens of BBSs are listed on VersaNet's BBS Showcase at <http://www.versanet.com/bbsshow/> site. VersaNet offers this deal to get sysops' help in finding customers for its web services, and there is some potential money for the sysop who refers a customer to VersaNet. Commissions start at 3% and can increase to a maximum of 15%. Commission rate increases have nothing to do with how many paying customers a sysop refers to VersaNet. One's commission rate increases by 2% for each BBS sysop one refers to VersaNet who takes a free ad in the BBS Showcase. So if you help 6 or more sysop buddies get free web ads, you can earn 15% by helping your local sporting goods store start a web site using VersaNet's services. Got it? Contact: VersaNet International Inc.: (540)885-2438 voice or <mailto:tmorris@versanet.com>

PSINet CONNECTS BRAZIL

Continuing its international expansion, Performance Systems Intl. (PSI) announced its intent to form a joint venture with Compugraf Tecnologia e Sistemas S. A., a Sao Paul, Brazil-based computer/telecommunications systems integrator. Compugraf will build and manage the local network and connect it to the PSINet infrastructure. It will also market and support local customers. PSINet's role apparently is to provide international connectivity in exchange for 33% of the venture. Contact: PSI, 510 Huntmar Park Drive, Herndon PA 22070. (703)904-4100 voice; (703)904-4200 fax; <mailto:info@psi.com> or <http://www.psi.net>

BULLETRON OS/2 INTERNET-READY BBS

From Online Technologies comes Bulletron, “a super powerful Bulletin Board System that looks professional and operates flawlessly” under OS/2. It allegedly supports up to 1,000 modem or telnet connections on a single PC,

BLAST INTO THE FUTURE!

With **Game Connection** your customers can warp to other worlds via multi-player Descent, DOOM, DOOM II, Heretic, Spectre VR, Warpath, Empire Deluxe and Global Conquest. And support for even more stellar games is on the way.

Game servers for under \$1,000 include all necessary software for an 8-line server. Fourteen to 128+ line servers are also available.

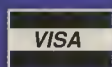
Worldgroup™, **The Major BBS®**, and **Galacticomm** software and hardware are also available at discounted prices. Worldgroup, using the new client/server technology, provides a full Windows GUI and offers customers a point-and-click interface to your system.

Available for Worldgroup and The Major BBS from Sirius Software: MailLink, Match Maker, Employment Service, Mine Field II, Remote Console, Chat On Demand, VisaMan™, OmniMail™, Tradewars 2002 and many more.



Call today for your free catalog:

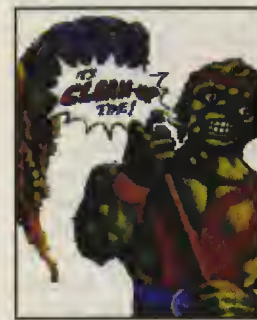
Sirius Software, Inc.	Voice	(307) 237-0065
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Casper, WY 82609	Fax	(307) 265-4452



includes relational database features, up to 32,000 message areas and an integrated telnet server. Bulletron includes order-entry and credit card processing modules. It need never be taken offline for maintenance or system backups, and can be fully managed via dialup or telnet connection. Call the demo system at (516)689-0289 to download a free review copy. Contact: Online Technologies, P. O. Box 577, E. Setauket NY 11733. (516)689-2457 voice; (516)689-0167 fax; mailto: syslife@vnet.net

"TOXIC AVENGER" FILMMAKER HOSTS SCRIPT CONTEST

So you think you could write a better screenplay than *The Toxic Avenger*,



Class of Nuke 'Em High or *Surf Nazis Must Die*?

Well, Troma Studios, producer of these and other classics so gawdawful they're hilarious, will give you a shot at fame and embarrassment,

plus a chance to win \$50. The production company is seeking contributors to "the first screenplay featuring over forty screenwriters." The collaborative film will be entitled *Class of Nuke 'Em High IV: Battle of the Bikini Subhumanoids*. (No, this is not the April issue of *BW*!). "Traditionally, our screenwriters are whoever happens to be sitting at the end of the bar, or a derelict in a box outside the Troma Studios, or a human reject standing in the middle of the George Washington Bridge babbling nonsense syllables... But this time we're going to do it different," says Michael Herz, studio VP. Contestants submit two-page contributions to the collaborative script to the studio's web site at <http://www.troma.com> and every two weeks one contribution will be chosen to continue the plot – or whatever it turns out to be. The next two weeks' worth of contributions will be based on the previous winners. Contact: Troma, Inc.: 733 9th Ave., New York NY 10019. (212)757-4555 voice. ♦

APDI – The Nation's Largest Service Bureau

With over 500 simultaneous connect lines (and growing fast!) APDI is the nation's premier Service Bureau providing customized on-line systems for corporate and professional organizations nationwide.

APDI will work with you to design your on-line system and then implement and operate it at our state-of-the-art Service Center located just outside of Washington, D.C. We provide all hardware, software and communication facilities required to make your system a success. We also provide a professional Help Desk to assist your users in connecting. You are free to concentrate on the data, APDI takes care of all technical details!

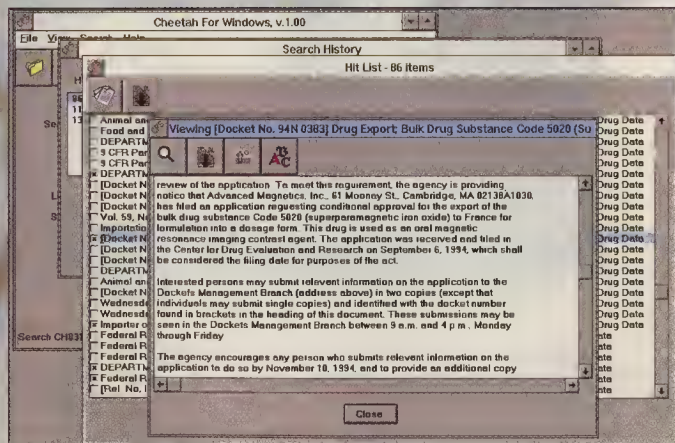
Your Choices

APDI offers you a wide range of options for your on-line system including:

- **User Interface:** MS Windows Client, RIP, ANSI, Terminal
- **Connect Method:** Toll Call, 800 Number, Local Call Nationwide, ISDN
- **Internet Access:** Telnet, World Wide Web, E-Mail
- **System Design:** Customized to present your unique image

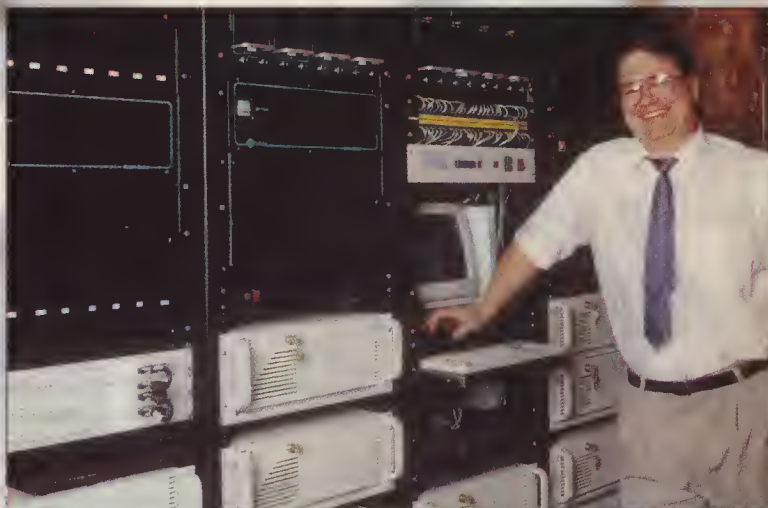
On-Line Applications

APDI has implemented systems for some of the nation's largest organizations. We have developed service bureau applications for **publishing, associations, university courses, customer support, software distribution, CD-ROM order processing**, and more! If your project doesn't fit a standard application, we can develop a custom on-line system to fit your needs.



Screen shot from APDI's new Cheetah for Worldgroup Product

APDI's Cheetah product is the on-line industry's fastest and most powerful full text search and retrieval program. Search one or multiple databases using Boolean and proximity search phrases. Megabytes of data can be searched in fractions of seconds. You can take advantage of Cheetah on your system running at APDI's Service Center or you can buy the package to run on your in-house system. Cheetah is compatible with virtually all popular BBS programs including a new version for Galaticomm's Worldgroup!



President Mark Burnett in one of APDI's Computer Rooms

What Makes APDI Number One?

Our State-of-the-Art Service Center and Secure Environment

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- Fully redundant hardware systems
- Independent backup power facility
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- Complete virus scanning
- 7 by 24 system monitoring
- Continuous technology refreshment

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Some of the largest and most progressive corporations, associations and even major online services have selected APDI to implement and operate on-line systems for them. Additionally, many manufacturers and service providers have chosen APDI as a business partner. Among these are:

- Galaticomm, Inc. • Mustang Software, Inc. • CompuServe Network Systems

Our Reputation and Demand for Excellence

...having worked with APDI in setting up the PTO's on-line information system we continue to be impressed with their high quality of service and professionalism.

Jim Moriarty, United States Patent and Trademark Office

...we are very impressed with APDI's excellent support and operation of mission critical Worldgroup based on-line systems.

Scott Brinker, President, Galaticomm, Inc.

...CompuServe is excited about the benefits that APDI can bring to our existing and future client base.

Jeff Kiely, CompuServe Network Systems



APDI™

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TECHNOLOGY FRONT by Jim Thompson Western News Service

ONLINE WORKSHOP: FACELIFT FOR YOUR TEXT-BASED BBS

Interface Builders in Ketchum, Idaho, has taken a unique approach to the client/server revolution that has hit the online community. Instead of building a new server system along with a client or terminal, they have created a system that can be "layered" on top of any existing BBS.

During the programming of the terminal or client program, specific actions are triggered when certain text is sent or received. The result is the creation of a sophisticated client/server system through the construction of only the client program.

The beauty of this concept is that there are few limitations placed on the look of the final system. Chubb calls it the "desktop publishing solution for online systems." With Online Workshop, you can create integrated graphics, scrolling lists, sounds and fully formatted pages. All of this is created in the authoring program which runs on a Macintosh. The resulting package is distributed to users along with an engine that runs the interface.

Jim Thompson is Managing Editor of Western News Service in Los Angeles, California. He also manages the Marlboro Racing News BBS. CompuServe: 72777,2677, MCI Mail: 321-4127, mailto: jim.thompson@wnsnews.com

"Online Workshop was designed to layer a graphical interface on top of a textual one, without the need to reprogram the text-based host. Often an existing text based host system is large and complex, and in many cases would be both difficult and expensive to change. Using a layered system you can provide users with a graphical interface while still maintaining a familiar method of access," said Lee Chubb, President of Interface Builders.



THIS Is a Text-Based BBS?

Online Workshop allows you to create a program that is run on the caller's local drive. This program does not require input from a modem or a remote source. In fact, with Online Workshop you can create a stand-alone program that is fully functional but has nothing at all to do with modems. What makes the system unique is its ability to send and interpret information correctly from a text-based BBS. This can be any BBS. It doesn't matter if it runs on a PC, a Mac or a mainframe.

"With Online Workshop you can create a high quality interface that is entirely resident on the client. It is local to the client and can function while not connected to the server. You have complete control of the functions it executes," notes Chubb.



Graphics, Scrolling Lists, Sound

Currently, Online Workshop can only create a Macintosh program. That is, the client can only be run on a Macintosh. "We are working on a Windows version and fully intend to have a working version available by the end of the year," said Chubb. They also plan to have a Windows95 version of the authoring program in the future.

Chubb notes that, while the client program runs only on Macs, the interface data files created by the Mac-based authoring program can also run on a PC. "We took all of the possibilities for cross-platform compatibility into account when we built the system. For instance, where the Macintosh has resource forks where you store much of the data, we came up with a flat file system that incorporates all of this — so the file itself is transportable across both Windows and Macintosh platforms. Some translation has to take place in order for it to work on the Windows side, but the translation is transparent to the user."

Installation of the “interface building” program is extremely simple. Insert the disk, double-click on the installer, select a folder for the program and the rest is automatic. Everything comes on a single diskette.

Online Workshop is a well-thought out program that even non-programmers will find easy to use. The major functions are all accessible in a “drag-and-drop” environment which takes most of the trouble and frustration out of learning and using a scripting language. Each of the separate elements of the interface are created as objects, including visual elements, data and functions. This allows you to generate most of the code with little or no fuss.



Drag-and-Drop System Design

The Object Palette is the root level of the system. From here you select and create the objects needed for your final interface. The available object types include:

- String**
- Boolean**
- Char** (stores small numbers)
- Short** (integers from + or - 32,768)
- Long** (integers from + or -2,147,483,648)
- Decimal**
- Point**
- Rect** (two-dimensional rectangle)
- Icon**
- Picture** (stores PICT graphics)
- Window**
- Field Alias**
- Menu** (information used to create a pull-down menu)
- Function** (commands which manipulate objects)
- File Format** (allows for the saving and reading to disk)
- Delimiter Set** (stores information on how to delimit or format a stream of text from the host)
- Trigger** (begins specified action based on characters received from the host).

The manual is comprehensive and clear. I must admit, however, that I did have some trouble understanding exactly what I needed to do when I first began. I think this was more a matter of not understanding the underlying concept of what the program is designed to do than a problem with the documentation. The manual does include an excellent tutorial. It took me a few hours to run through the tutorial, but once done, I had a full understanding of how to create my own interface.

As with most client/server systems, much of the work is done by the client side of the equation. This makes for an easy-to-use interface for the caller. For example, logon information (name, password, etc.) is entered before a call is even initiated by the system. Once entered, the client program places the call and connects to the host. It's seamless and easy and takes most of the pain out of communications, especially for the novice user.

Once online, the client program acts as an interpreter for the host. It interprets the stream of text sent from the host and provides a more usable and, certainly, more interesting interface. Chubb explains how ASCII text becomes GUI graphics: “While blocks of data are received, a trigger object on the client specifies a text pattern from the interface to watch for and a function or window to be called when that text pattern is matched.”

I tested Online Workshop on an old Macintosh IIX with 8-MB of memory. After loading the system files, this left me with only about 5-MB of usable memory for running programs. Although the client program provided by Interface Builders (called **Brainstorm**) required a full 8-MB of memory, I was still able to use it. It did run somewhat slow, but was still quite smooth. I was also using a TelePort Platinum 28.8 fax/modem (see article titled “Teleport Platinum — high speed Mac Modem” in this issue) which did take much of the pain out of the downloads. I also called the same system using a straight terminal program (**Zterm**) so that I could see the “native” platform. The difference between the interfaces was dramatic. It was, in fact, hard to believe that I was calling the same system.

For the retail price of **\$995**, you get the authoring program, the runtime engine and a license for distribution of 350 copies of the online engine program.

There is also an impressive list of features that are planned for future versions of the software. One item at the top of the list is the integration of sound. Another plan is for the addition of animation. “We plan to offer a library of what are basically film effects — pans, wipes, dissolves, etc. — that can be incorporated into the interface program,” said Chubb. There are also plans to add further “drag-and-drop” features.

CONCLUSIONS

The interface building tool is easy to use. If you have even a fundamental knowledge of programming you can construct your own interface in short order. However, while creating a basic system is easy, you may not find all the tools you need or want. You can create windows, icons, scrolling lists and even display pictures. What you cannot do is create native graphics.

Graphics will have to be converted to the PICT format and then displayed as a static picture. Without a graphics creation program, you cannot draw unique objects as you can with Telegrafix' RIP (Remote Image Protocol) or MindWire's WIP (Windows Imaging Protocol). The result is a very attractive, but quite commonplace interface. To the user, the system looks like any of the other Macintosh programs he/she is running. In some cases, this may be exactly what is desired. However, the lack of a graphical language does provide limitations.

In most client/server environments, the ability to create visually “interesting” interfaces often leads to bloated, oversized programs. I was impressed with the fact that the sample system (**Brainstorm**) provided by Interface Builders fit neatly on

a single diskette. This included the runtime engine and all the essential screens. The data, however, had to be downloaded from the host as it was requested. This means that the first time caller does a lot of waiting while images, text, etc. are received. This can be somewhat tedious but is compensated for during subsequent accesses of the material. This information is stored on the callers disk and is available the next time it is called or requested.

Under this system, subsequent requests for data (this could be pictures and text from an online clothing catalogue for example) display quickly and without problems. From the user's standpoint, the perception is a fast, efficient system. The drawback is that over a period of time these data files can build up and, ultimately, take up a lot of disk space. But, as Chubb points out, the "resources are available within Online Workshop to construct a routine that would check the files and delete or update them. You would have to program this, but the facilities are there."

Those in the DOS and Windows world may find the choice of the Macintosh platform for creating the client program a problem. However, when you consider that a basic, inexpensive system is all that is needed (again, I used an old Mac IIx for testing), this is really not such a big deal. I think the cost of a used machine is more than worthwhile when you consider that you will be able to provide all of your Mac users with a client program.

At the time this article was written, the one major drawback was the lack of a Windows runtime engine. This is an absolute essential. As I have said many times in the past, for a program to have any hope of becoming a standard or even to be in widespread use, it must be accessible by DOS, Windows and Macintosh callers. I certainly hope that they deliver on the promise for a Windows runtime engine by the end of this year.

I like the program. It's easy to use and does allow you to give your old BBS a face-lift without having to make any major changes to the basic (host) system. It also means that users who do not want or cannot access graphics because of limitations to their systems (yes, there are still people using monochrome screens and not running Windows) can continue to call your BBS. For the timid or those who just hate change, it also provides an easy transition from an old to a new interface. ♦

CONTACT:

Online Workshop

Interface Builders

P.O. Box 587

Keetchum, Idaho 83340

Tel: (208) 726-5232

COST: \$995

TELEPORT PLATINUM — HIGH SPEED MAC MODEM

If you are using a Macintosh, the TelePort line of modems from Global Village Communications is one of the best accessories you can add. Of course, you can use any external modem with a Macintosh, but the TelePort series is set up especially for the Mac platform.

I tested the **TelePort Platinum v.42bis Fax/Modem**. It's about 50% longer than a bar of soap and just about the same thickness. The permanently attached cable plugs directly into the Apple serial port. Easy software setup makes getting online a breeze.

While not revolutionary in the world of modem communications, the specs on the TelePort Platinum are complete. It includes V.34 and all lesser data communications standards. You will also find both asynchronous and synchronous (autosync) modes and V.42 (LAP-M), MNP Class 2-4 error correction along with V.42bis and MNP Class 5 data compression and AT Command set

compatibility. The fax is Group 3 compatible and operates at up to 14,400 bps. If your phone line is shared with a fax/modem and a telephone answering machine, the TelePort Platinum has a call discrimination feature.



The TelePort Platinum also takes advantage of the high-speed serial port capabilities of the AV and Power Mac systems to move data at speeds up to 115,000 bps. For those who have older 68040-based Quadra and Centris computers, Global

Village is offering a software upgrade which overcomes the slower serial port speeds on these models. The software provides data compression techniques to attain transmission speeds above 57,600 bps.

It also comes with a nice selection of software. This includes **GlobalFax 2.5**, a very complete fax package. The fax software includes a "fax center" for monitoring the status of fax transmissions. This includes some 40 features such as smart dialing, for automatic area code adjustments, greyscale imag-

ing and billing code support. In addition the modem is bundled with **GlobalFax OCR** software for converting faxes to text files. The package also includes Apple **Remote Access** software for connecting to your office from remote locations.

The one area where I found it lacking is the front panel display. There are only three indicator lights — one to indicate the power is on or it is in auto-answer mode, another to indicate a connection and a third to indicate that there is "activity" on the line. This will probably not bother most novice users and most "average" Mac users, but I found myself looking for more feedback about the status of the connection.

I found the modem to be stable even on very noisy lines. Throughput speeds were also very good. If you own a Mac and need a modem, I can strongly recommend the TelePort Platinum.

TELEPORT PLATINUM

Global Village Communications, Inc.

1144 East Arques Avenue

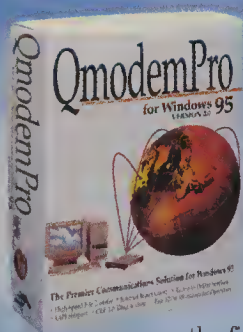
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Available at Software Etc., Babbages, Computer City, CompUSA, Electronics Boutique, Egghead and other software outlets for \$129 or less. Registered Qmodem/QmodemPro customers call for upgrade pricing.



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Use your favorite Windows icons to customize the dialing directory for data, voice or Telnet session. Double click and in seconds you're online. It's easy!



QmodemPro's Picture File Viewer (PFV) lets you view and zoom in close to your favorite GIF, BMP or JPEG file.

Exciting New Features Include :

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- OLE 2.0 support so you can drag & drop files, phone book entries and text to and from other Windows applications quickly and easily.
- 35 Terminal emulations, including ANSI, VT100 and IBM 3270 to get you on-line quickly while the programmable keyboard will satisfy the needs of any system administrator.
- A programmable tool bar with up to 50 different program function icons.
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- Fully multi-threaded protocols that keep going even when your PC is very busy.
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- TAPI support for sharing communications devices between multiple applications.
- MAPI support for transferring text, images and files to major mail applications including Exchange, Microsoft Mail, and cc:Mail.
- Telnet support with MD5* secure passwords for Internet access to your favorite sites.

* RSA Data Security, Inc. MD5 Message-Digest Algorithm
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Rediscovering A National Dialogue: The Promise of Cyberspace

by Newt Gingrich,
Speaker of the U.S. House of Representatives



One of the greatest practical impacts of the Information Age has been to give anyone with access to a computer and the online world a voice—on everything from local property taxes to the balanced budget. With one simple click of a mouse, one is granted rights of citizenship into a virtual community of individuals that

spans the globe. As the Internet, including the World Wide Web and the various online services available today, has grown, so, too, has the ability of the individual to participate in discussions on issues of regional, national, and even global importance without the usual constraints which have traditionally limited meaningful discourse among groups of individuals (cost, distance, ease of communication, geographical barriers, etc.). We cannot fully appreciate at this moment the impact this revolutionary way of communicating ideas will continue to have on reasserting the true creative and expressive potential of the individual in our democracy. The freedom of individuals, without regard for class, nationality, or ideology, to express their viewpoints, is an essential part of the Internet and the online community. Such freedom stands in sharp contrast to the “group-think” of recent decades that was perpetuated by those who still believe in a top-down “Washington knows best” attitude. The ability to engage in an electronic forum on flat taxes, welfare reform, term limits, or virtually any other issue of importance to an individual or group of individuals is helping to overcome the once wide gap between Washington and the American people.

Back in April, following the completion of the historic 100 days of the Contract with America, we discussed the need to open a dialogue with the American people and

encourage participation in this discussion about where we are going as a nation. The Internet and other forms of electronic communication provide an excellent vehicle for facilitating this kind of dialogue by partially mediating the barriers which have historically inhibited a national conversation about our future. Cyberspace is not only about technology—it is the optimism that springs from new ideas and new ways of exchanging those ideas. It is about creating a national dialogue of the people by the people and for the people; it’s about restoring the sense of ownership and the power derived from truly participating in our democracy. This is the premise behind the Contract and behind our attempts to reform the federal government.

Management theorist Peter Drucker says if you’re not already doing something, would you start? And if you wouldn’t start, why are you still doing it? That is a theorem of effectiveness to which we must hold government as well. The process of government must be made more open to the American people by ridding ourselves of the obsolete thinking and practices which only serve to strengthen bureaucracies — at the expense of personal freedom, opportunity and progress: To accomplish this, the structure of government must become more adaptable to emerging technologies that will enable these agencies to be more customer friendly and effective.

We must also decentralize government so that the authority for making policy decisions is closer to those individuals who have to live with the results of those decisions. Regulations must make sense and there is no question that we must balance the need to protect the American people with the need to remove unnecessary bureaucratic barriers to innovation and opportunity. However, we should be wary about too much federal regulation of emerging technologies like the Internet. Quite frankly, information superhighway phraseology is problematic as it infers some escalation in federal control. The term “cyberspace” is a little more accurate since it denotes an open entrepreneurial frontier ripe for exploration rather than the Industrial Age image of a highway with on-ramps, off-ramps and a speed limit. While the distinction is, in part, semantics, these are two distinct visions for the future of the Internet.

We as a society are better off when government gets out of the way so that innovative technologies can see the light of day when it makes sense to do so. However, that doesn't mean that some self-government of the Internet, especially in the area of content, may not be a good idea. To parallel the virtual world with the real one, we can say that simple residency does not necessarily equate with citizenship—especially good citizenship. With citizenship comes responsibility. Therefore, some industry involvement in developing and enforcing its own rules and policies on Internet content makes more sense to me than waiting for Congress to do it. Without some self-regulation by the virtual community, there may be few options apart from government intervention, which could be a setback for the Internet's advancement.

Given the projections that there will be 120 million machines connected to the Internet by the end of this decade, it is imperative that we understand the implications of this revolutionary means of communicating and sharing information. We must think rather intentionally about how we can use this daunting capability to create a brighter future for the next generation. One such application lies in the Internet's immense capacity to educate. In my estimation, the measure of what we accomplish as a society relates strongly to the kinds of opportunities we provide to our children. It is absolutely critical for our young people to have the skills they need to compete as we enter the next century.

The widespread globalization of technology has created a need for a highly skilled workforce to develop, produce and support innovative information systems. The Internet can serve a central role in the classroom as a resource for research, presentations and as video conferencing becomes more commonplace and cost-effective, students will be able to participate in global forums with other students or guest lecturers.

Elementary school students in Topeka will be able to connect with their counterparts in Lyon for help with their French lessons and tenth-graders in the inner city of LA will be able to link to students in Miami for a virtual debate on public policy. Close to 900 elementary and secondary schools in the US already have their own Web pages, and

these are being used to display student projects and school publications as well as to collect information teachers can use to capture the imagination of their students in the Age of Nintendo. In the not-too-distant future, those schools not actively involved in using the Internet and other PC-based electronic communications tools in the classroom will put their students at a tremendous disadvantage, one that will be difficult to overcome. That presents us with another challenge of the Information Age—the need for school choice so parents will have the power to insure that their children are attending institutions which will provide them with the skills needed to compete in the knowledge-worker economy of tomorrow's Information Age.

If we are to renew America, we must lead the world in creating the information age society of the future. This leadership is not just about technological innovation alone but about how we apply and use this technological capacity to provide opportunities for personal growth and empowerment. If we are to become a true opportunity society, every man, woman, and child in America must have access to the best of what we are and have achieved as a nation. With these technologies, people in the heart of rural America or the most troubled inner city neighborhoods can access the best we have to offer in health care, education and job opportunities.

Our vision is for an America that values innovation and entrepreneurship and removes unnecessary barriers to opportunity. Many of us in Washington are working to open a new dialogue with America about who we are as a nation, where we are going, and how we are going to get there. Out of this dialogue, we hope to create a new partnership with the American people. The promise of cyberspace is that, with these tools, all Americans, regardless of their class, race, or geography, can rediscover their voices as individuals, communities, and as a nation to participate in this democracy. Armed with this understanding, we can work together to face the challenges of renewing and restoring the American dream as we enter the 21st century. ♦

Exclusive for Boardwatch Magazine

MMB TEAMate UNIX[®]



Release 4.0

It's a Killer!

WEB BBS

TEAMate GUI Clients include WWW Browser

TEAMate software now contains an integral WWW browser. This means that you and your users can now mix HTML and other data within your TEAMate Bulletin Board. Forums, download libraries, upload areas, etc., can be in structured BBS format and HTML can be used where appropriate. You can mix and match as desired and even include HTML documents as email or messages. The TEAMate client automatically determines whether HTML data is present and switches to HTML mode if required. From within an HTML document you may also “jump” into BBS mode. This means that if your hypertext link goes somewhere in the BBS other than to an HTML document, the client will switch automatically to display the information, the order form, the threaded list of messages in the discussion, etc., in BBS mode.

Your Server Doesn't Need to be “On the Internet” to use HTML

TEAMate GUI clients for Windows 3.1, Mac and OS/2 support both serial and TCP/IP access so your users can run directly connected to the Internet or with just a normal modem connection.

Since the HTML viewer built into the TEAMate client does not require a TCP/IP connection, you and your users can build HTML documents on your server and view them with the TEAMate GUI client. No Internet access is required to use HTML. Normal dialup directly to your server is all you need.

Worldwide WEB Sites

Any HTML document within your system can “point” to a Web site outside your system and the user will be connected to the remote site. To use this feature your server must have a TCP/IP link to the Internet. The user may be running an async connection or TCP/IP.

Full Text Indexing of HTML

One of the very powerful features of TEAMate is its built-in capability of fully indexing all of the items in the system. This feature is carried over with the HTML documents so that the HTML is fully indexed on content. Your users can do a simple full text search, pull up a list of HTML documents and then follow the links to the information they need. You can add new HTML pages to your system easily and even categorize them using the TEAMate topics, so that your users can find what they need, fast!

Internet Access INTO Your System

If your system is “on the Internet” you can run the TEAMate WWW server module so that anyone can connect to your bulletin board via any standard WWW browser. For WWW browsers TEAMate supports user authentication using the built-in TEAMate access controls plus automatic generation of HTML for those areas of your server that only contain ASCII and graphics. A standard feature allows any WWW browser user to post items to the bulletin board after they “login” via the WWW browser using their TEAMate user name and password. All TEAMate GUI clients can be used on the Internet to directly access your server.

FTP in TEAMate Client

The Internet File Transfer Protocol is built into the TEAMate GUI client. Users can connect to any remote FTP site that you permit and you can “script” the login procedures using the built-in scripting language. Files are transferred directly to the user's PC from the remote FTP site.

Try the GUI Client Today

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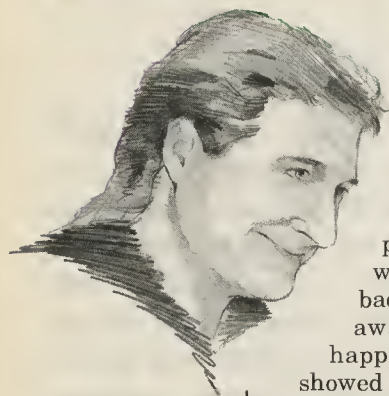
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WEBWATCH

BABB'S BOOKMARKS by Chris Babb

WRAPPING UP THE FIRST YEAR



Chris Babb is a Senior Systems Engineer for Control Masters, Inc., a Systems Integrator located in Downers Grove, IL, where he designs industrial automation software by day. He's a member of the Aquila BBS/Internet Team by night. Chris has worked with Aquila since 1990 and currently handles technical support, Web design and construction, Internet training and various other online and offline duties. In his meager spare time, Chris enjoys music, playing bass guitar, the outdoors and his kitties. You can reach Chris via <mailto:chris.babb@aquila.com>

Well, it's the end of 1995 (at least for us writers) and a lot has happened over this past year. My very first words were printed in this magazine back in December, 1994; we had the long awaited release of Windows 95 actually happen in 95; and the trial of the century showed us how $2 + 2 = 5$ (and how you can get people to actually believe it). But the most exciting thing is that we are just seeing the tip of the iceberg when it comes to new uses of and applications for the Internet and the Web. I'm extremely excited about the capabilities of HotJava and VRML browsers and I can't wait to see where this all leads. You can bet that I'll be keeping everyone abreast of the current happenings. I'll even tell you a little about the resources available to help you get in the thick of things. There's nothing like being on the bleeding edge, is there?

Of course, Christmas is upon us this issue, and I have to present you with a Christmas site or three. Not all that much is available yet as I think that most people have some mercy and won't start the season too early. Then again, I went to a local county fair in September and the town's Christmas decorations were already up. I almost started laughing until I imagined the fun of going (or trying to go) to the stores where the Christmas mobs would soon be herding. Well, bask in the glow of the history behind Christmas and prepare to send your letters off to jolly old St. Nick. I'll show you how.

Since my grandiose plans to deluge you with Christmas sites were dashed by the lack of them on the Net (at this time), I'll present you with several sites full of useful Web accoutrements, guaranteed to add a few bytes to your page and maybe even something useful.

CHRISTMAS ON THE WEB

Santa Claus Home Page

<http://mofile.fi/rec/santa/santa.htm>



Sometimes it makes you wonder what started all of this. What is the real meaning behind Christmas and where did the traditions that surround this day come from? Enter the Santa Claus Home Page. The mission behind this page is simple.

"Christmas is one of the most powerful and certainly most old traditions in human history. In these pages we try to give facts and interpretations of Christmas and Santa Claus around the world."

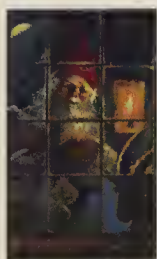
That it certainly does and much more. Biblical passages from Luke 2 describe the first Christmas and how it came to be. These passages are presented in a table format with some beautiful graphics to complement them. Along with the passages are a stable full of Christian Web sites for those desiring further spiritual enlightenment (I highly recommend the Vatican Art Treasures page). For those who want to know where the tradition of Santa Claus comes from, click on The Story Of Santa Claus. This page highlights the history behind Santa Claus both in this country and abroad. There is some extremely interesting information to be gleaned from these pages. Would you be surprised to know that the current pot-bellied, red-suited Santa that we know today didn't really come into being until about 100 years ago? Or that in Finland, Christmas was a festivity to ward off evil spirits and that Joulupukki (translated literally as Yule Buck) instead of giving gifts used to demand them to keep from causing havoc? Most interesting.

Clicking on "The Snowy Season" will help to dispel any myths you may have about why the North Pole is so significant to Christmas, why we have Christmas trees and why Santa has his "Helpers." A further click on "What Makes Christmas" will furnish you with reasonable explanations of the why and where of Christmas Cards, mistletoe, gift giving and a host of other Christmas related traditions. And I thought all of this was dreamed up by the commercial interests.

All in all, an excellent source of information, presented in a most visually pleasing manner. I was especially impressed with the gradient background. More interesting than the standard gray and less epileptic than some of the "in-your-face" background textures that everyone seems to be using these days.

Computer Concepts Personalized Letters From Santa

<http://www.netaxs.com/~flandk/santa.html>



I remember when I was a kid and my Mom and Dad had Santa come to our house on Christmas Eve. Now, I already knew the facts about Santa, and it sure gave things away when part of his mustache came unglued. But it was still a fun experience and one that I hope every child gets to experience. Short of having jolly old Sam from down the street get all dressed up with a pillow for a belly and crazy glue for the beard and 'stache, for \$5 you can have a personalized letter sent or phone

call made directly to your child. Phone calls may involve long-distance service charges; call (215) 245-7525 for pricing.

Besides letters or phone calls, this site also offers you the ability to order personalized books, coloring books and puzzles from a wide assortment of titles. Each of them is designed with your child's name throughout and is full color, hard bound and plastic coated. An excellent and unique gift idea for your child.

Your Direct Line to the North Pole

<http://north.pole.org/santa/>



Tell me what person hasn't or what child wouldn't want to send a letter to Santa. I still send him letters asking for my favorite computer and music gear. That and maybe a little more tolerance for the often offended masses.

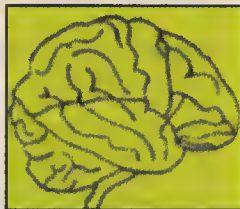
This page is simple but effective. It asks for your name, your age, whether you've been bad or good and your personal message to Santa. A simple click and you have both short-changed the postal

system and sent your message off to the North Pole. I'm sure you and your kids will love it.

USEFUL WEB RESOURCES

NetMind Free Services Home Page

<http://www.netmind.com/index.html>



"The objective of this page is to provide hyperlinks to free services available on the Web." Wow, there are lots of them too. If you're looking for that special touch on your own home page or just looking for something to make your life meaningful, you must visit here. You'll find everything from Web Robots that will let you know when

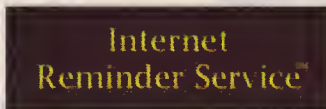
your favorite Web pages are updated to SIFT, which will allow you to set up searches in USENET that sift through the minutiae that seem to fill the newsgroups to find only those articles that interest you.

Among the more useful items you will find MakePage, a site that specializes in generating HTML code for you based on your input and the World Wide Form and CGI Generator, a site that will let you fill out a simple form with the information you want in your form. A click on SUBMIT will automatically generate both the form HTML and the .CGI code to process it. You can then download the code immediately. Could they make it any easier?

I counted about 23 different interactive sites here. This page seems to be updated about once a month with 3 or 4 new and fun things to do and I highly recommend adding it to your bookmarks.

Internet Reminder Service

<http://www.novator.com/Remind>



If you're as forgetful as I can be, this service just may be the answer. You simply fill out a registration form and you will be notified by e-mail when it's

time to be reminded. Simply fill out the form with all the pertinent personal information and select from a variety of the customary holidays or personal occasions. The holidays include the standard Christmas and Thanksgiving and even go as far as Mother's-In-Law Day. The personal occasions allow you to specify up to 10 reminders by picking the type of reminder, the date and the name of the person (or any other short message) you need to be reminded of. You can also petition this service to add your favorite holiday to their list. Very cool.

Web-Counter Usage Page

http://www.digits.com/web_counter/



Counters seem to be one of the more popular add-ons for Web pages. I constantly get requests for information on where people can get CGI (Common Gateway Interface) scripts for their server or for their homepage. Scripts and other programs must be run on your Web server or your provider's Web server to return the number of times your page has been "hit" when your page is accessed. [See "Publishing On the Web" in this issue for sam-

ples of such programs. – Ed.] If you're a little gun shy about running CGI scripts on your server or your provider does not have a counter available for you to use, this is a great alternative. The Web-Counter is brought to you by Gray Watson and USA OnRamp and can be used by anyone on the Net.

You create a counter by filling out a form that asks for a counter name and the count you would like to start with. Pressing the SUBMIT button will generate your counter and return a confirmation that your counter is alive and will also give you an example HTML reference to use in your pages. Drop it in and voila, a great looking counter on your page.

There are various styles and colors you can use and full instructions are provided to help you customize your counter along with complete troubleshooting information should you get the dreaded broken icon. I generated my counter and had it up and working in about 3 minutes with no real problems.

This is a quick and easy way to get a counter up on your page. The only drawback is that it can take extra time for your page to load depending on the current state of their server. ♦

NutSite© Of The Month



Buttons Galore

<http://www.sas.upenn.edu/~pitharat/buttons.html>

Do you like buttons? Do you like pressing buttons? I do. Ever since I was a kid, I've been pressing buttons of some kind or another. My regular job allows me the pleasure of programming factory equipment, then I get to press the button and watch it go. So, you might say that I am a button kind of guy. My friends also like to abuse me and everyone else through insults and nasty comments. It's great fun. For a little Web fun and abuse, you should check this page out. It gets the Nutsite of the month award because the person who sat down and created this aberration of buttons, spends a lot of time trying to push your buttons while you're pressing his. I think I'm saying buttons a little too much but then again, that pales in comparison to the number of buttons on this page.

I counted approximately 380+ buttons on this page. All of them have a saying and most of them do nothing but glare

back at you with some sly little insult. One of them will actually do something other than make you feel like a jerk for pushing useless buttons. The object here is to find that one button. What does this one button do? What is the great reward for making your eyes squint, your forearm sore and your finger blister in a button pushing frenzy? You figure it out.

That's all for this month and for this year. It's been a gas and I've had a great time finding entertaining and useful Web sites for your enjoyment while learning piles of stuff in between.

I have these as well as all of my past articles excruciatingly available for your appraisal at:

<http://www.aquila.com/babbs.bookmarks/>

Again, I hope everyone will tell me of a site or two that they find especially pleasing and/or useful so I can share it with everyone else. And keep those Nutsites rolling in! Comments, good or bad (preferably good) should be clicked off to:

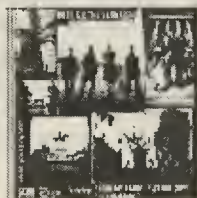
<mailto:chris.babb@aquila.com>

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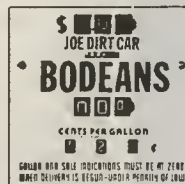
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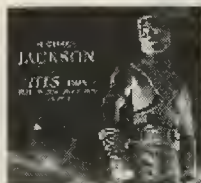
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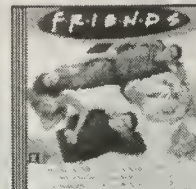


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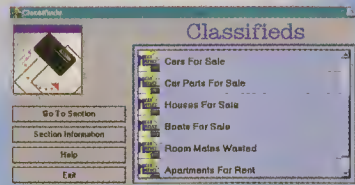
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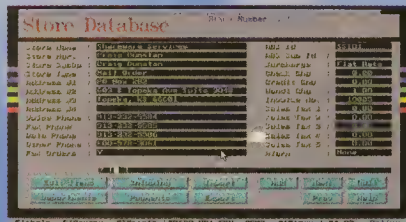
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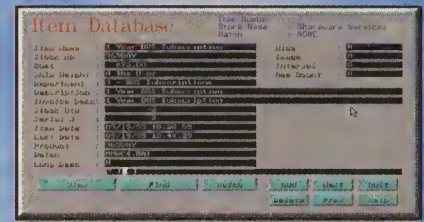
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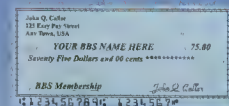


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PUBLISHING ON THE WEB by Michael Erwin

Part 11 — CREATING INTERACTIVE PAGES

This month we are going to start working on “interactive HTML” pages. Most of what we will be doing can be run on most Web servers. So over the next few articles, pay close attention. The source code listings have been moved to the end of this column, to make the explanatory text clearer.

We will start with a simple interactive web page. I want a Guestbook to which the browsers can send info or comments, which will be automatically updated in an HTML guestbook. For example, look at the Guestbook in figure 1.

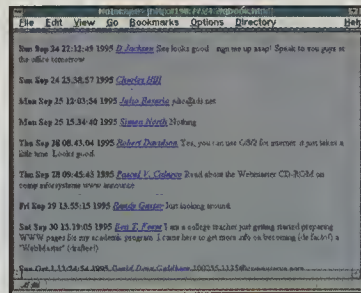


Figure 1
Guestbook Page
Generated from Listing 1

We can get the files we need from the Net, of course. I found a neat little piece of C code that can be compiled in most environments. You can get the GuestBook code at: <http://128.172.69.103/cworld/cworld.gmm1> and try it yourself. The code is shareware. If you like it — and you will — send Chris Stephens his well-earned \$20.00.

Guestbook's C source code is shown in Listing 1 and the HTML form is in Listing 2. In addition to the **guestbook.c** file you will also need another small piece of code called **util.c**, which can be retrieved from Stephens' site or from <http://www.ncsa.uiuc.edu/>

The **guestbook.c** file will need some minor editing. Change the target file name — **../htdocs/Admin/gbook.html** in Listing 1 — to a file on your server where you want the guestbook entries to be saved. This file doesn't have to already exist. It will be created by the guestbook program. You will also need to change **yourid@whatever.net** to your e-mail address.

To compile the guestbook program, place the **guestbook.c** and **util.c** files in a temporary directory and type:

```
make guestbook
```

Then link the file to the **util.o** by typing:

```
gcc guestbook.o util.o -o guestbook
```

Notice that I used **gcc**. That is the GNU C Compiler. If you don't have GCC you can probably use your favorite compiler.

THE GUESTBOOK HTML DISPLAY

Place the **guestbook.html** file shown in Listing 2 in a directory that contains your HTML docs. You will need to edit the line that says

```
<form method=POST action="/cgi-bin/guestbook">
```

Change the path name — **../cgi-bin/guestbook** — to the correct path of the compiled guestbook program. It should be in your CGI-BIN directory.

You are now ready to use the form and submit entries into your guestbook. The code in Listing 2 generates a form like the one in Figure 2.

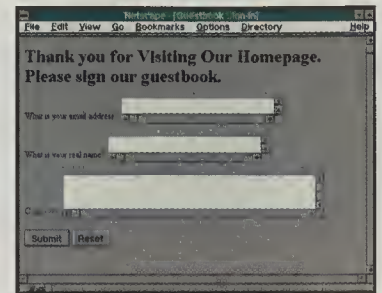


Figure 2
Input Form Generated by
Listing 2

If you dislike compiling C code, try Guestbook v2.2. You can get it at <http://alpha.pr1>

k12.co.us/~mattw/scripts.html. But to use Matt's Guestbook you will need to have PERL on your webserver. If you don't know what PERL is, check out <http://www.perl.com/>

Now I know this is getting COMPLICATED. But all programs are somewhat complex. Why should this be any different? The more you want your web server to be able to do, the more time and work are required on your part. Is this getting technical? Yep, and you haven't seen anything yet.

ADDING A HIT COUNTER

Let's add a simple counter odometer to our WWW page. This will tell the client how many people have been there before them. Look at Figure 3 for an example of a counter odometer. Chris Stephens has also written one for UN*X users, and Chris Babb (yes our Chris Babb) has written one for Windows using Visual Basic.

Find the following lines in the COUNT.C code and change them to reflect the directories that you store your HTML documents in.

```
fp = fopen("/httpd/docs/count.txt","r");
out = fopen("/httpd/htdocs/count.txt","w");
outxbm = fopen("/httpd/htdocs/count.xbm","w");
redirect("/httpd/htdocs/test.html");
```

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "The WebMaster's Resource." It is available for US\$24.95, plus US\$2.00 shipping in the United States or US\$5.00 elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information <mailto:mike@access.mountain.net>

For example, if your documents are in `/var/www/docs` change the `/httpd/docs/count.txt` to `/var/www/docs/count.txt`. Simple enough, right?

This program reads a number from the file `count.txt`, increments it and rewrites it to the same file. It then builds an X-bitmap image of the number similar to the odometer in your car. This bitmap is saved to the file `count.xbm`. The script then redirects another HTML file to the user as specified in the redirect. This HTML will reference the bitmap image (ie. ``). Therefore, you DO NOT have to modify the system configuration files or have server-side includes turned on.

Again you will need `util.c` from NCSA. To compile the counter program, place the `count.c` and `util.c` files in a temporary directory and type:

```
make count
```

Then link the file to the `util.o` by typing:

```
gcc count.o util.o -o counter
```

Copy `counter` into your `cgi-bin` directory. Make sure `counter` is readable and executable for `user`, `group` and `world`.

The easiest way to use the counter is to put something like the following into your `index.html` document.

```
<H2>You and <IMG SRC="/cgi-bin/counter"
ALIGN=MIDDLE> others, have visited here.</H2>
```



Figure 3
Hit Counter Generated by
Listing 3

what HTML to send you. I remember one of my favorite old classic games, *Adventure*, which was nothing more than a text game with a few variables and a bunch of IF/THEN statements. Now you could take some time and develop a nice adventure game by using Image Maps. It would be quite playable. Yes I know there are a few games out there. I want you to write/publish one. I have always heard "The best way to learn is by doing." So just do it. Send me your URLs of what you create.

For next month we will start building a WWW BBS. A what! Yep, a World Wide Web BBS. A way for the users of your web site to communicate, ask questions and post replies. It should even do threads.

Till next month... ♦

Michael Erwin
`mikee@eve.net`



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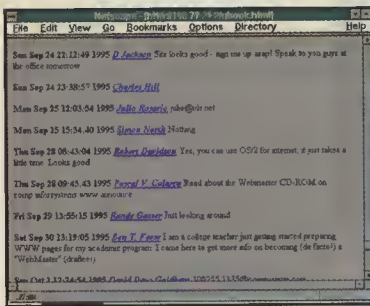


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Listing 1: Guestbook C source code



```
# GUESTBOOK.C

#include <stdio.h>
#include <stdlib.h>
#include <time.h>

#define MAX_ENTRIES 10000

typedef struct {
    char *name;
    char *val;
} entry;

char *makeword(char *line, char stop);
char *fmakeword(FILE *f, char stop, int *len);
char x2c(char *what);
void unescape_url(char *url);
#void plustospace(char *str);

main(int argc, char *argv[]) {
    entry entries[MAX_ENTRIES];
    register int x,m=0;
    int cl;
    time_t Ourtime;
    FILE *fp, *fopen();
    fp = fopen("../htdocs/Admin/gbook.html","a");
```

```
printf("Content-type: text/html%c%c",10,10);

cl = atoi(getenv("CONTENT_LENGTH"));
for(x=0;cl && (!feof(stdin));x++) {
    m=x;
    entries[x].val = fmakeword(stdin,'&",&cl);
    plustospace(entries[x].val);
    unescape_url(entries[x].val);
    entries[x].name = makeword(entries[x].val,'=');
}
Ourtime = time(NULL);
printf("<center><H1>Thank You for Signing our
guestbook!</H1></center>");

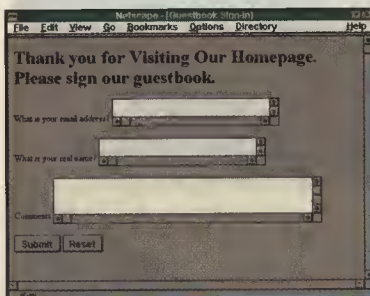
printf("<hr size=10><FONT SIZE=+1><address>
<a href=mailto:yourid@whatever.net>");

printf("Your Name Here</a><i>yourid@
whatever.net</i></address></FONT>");

fputs("<b>","fp);
fputs(ctime(&Ourtime),fp);
fputs("</b> <i><a href=mailto:",fp);
fputs(entries[0].val,fp);
fputs(" ></i><b>","fp);
fputs(entries[1].val,fp);
fputs("</b></a> ","fp);
fputs(entries[2].val,fp);
fputs("\n<hr>","fp);

fclose(fp);
}
```

Listing 2: Guestbook HTML source code

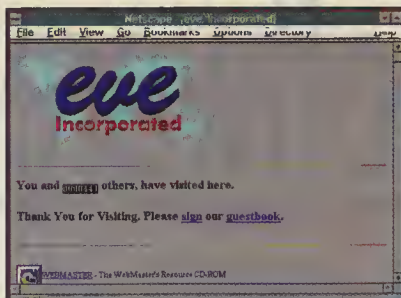


```
# GUESTBOOK.HTML

<title>Guestbook</title>
<h1>Thank you for Visiting Our Web Server.</h1>
<form method=POST action="/cgi-bin/guestbook">
What is your email address?
<textarea name="email" rows=1 cols=60></textarea>
<hr>
```

```
What is your real name?
<textarea name="name" rows=1 cols=30>
</textarea><hr>
Comments
<textarea name="description" rows=3 cols=50>
</textarea><hr>
<input type=submit value="Submit">
<input type=reset value="Reset"><p>
</form>
<br>
<hr size=10>
<FONT SIZE="+1"><address><a href=mailto:yourid
@whatever.net>YourName Here</a>
<i>yourid@whatever.net</i></address></FONT>
```


Listing 3: Script to Generate Hit Counter



```
Count.c Written by Chris Stephens (c) 1995
This Script is Shareware. See the Readme with this
Tar for information.
```

```
#include <stdio.h>
#include <stdlib.h>
char *digits[] =
```

```
{
  "0xf", "0xf", "0xf", "0xc3", "0x99", "0x99", "0x99", "0x99",
  "0x99", "0x99", "0x99", "0x99", "0xc3", "0xf", "0xf", "0xf",
  "0xf", "0xf", "0xf", "0xc", "0xc7", "0xc", "0xc", "0xc",
  "0xc", "0xc", "0xc", "0xc", "0xc", "0xf", "0xf", "0xf",
  "0xf", "0xf", "0xf", "0xc3", "0x99", "0x9", "0x9", "0xc",
  "0xe7", "0xf3", "0xf9", "0xf9", "0x81", "0xf", "0xf", "0xf",
  "0xf", "0xf", "0xf", "0xc3", "0x99", "0x9", "0x9", "0xc7",
  "0x9", "0x9", "0x9", "0x99", "0xc3", "0xf", "0xf", "0xf",
  "0xf", "0xf", "0xf", "0xc", "0xc", "0xc7", "0xc7", "0xcb",
  "0xcb", "0xc", "0x81", "0xc", "0x87", "0xf", "0xf", "0xf",
  "0xf", "0xf", "0xf", "0x81", "0xf9", "0xf9", "0xf9", "0xc1",
  "0x9", "0x9", "0x9", "0x99", "0xc3", "0xf", "0xf", "0xf",
  "0xf", "0xf", "0xf", "0xc7", "0xf3", "0xf9", "0xf9", "0xc1",
  "0x99", "0x99", "0x99", "0x99", "0xc3", "0xf", "0xf", "0xf",
  "0xf", "0xf", "0xf", "0x81", "0x99", "0x9", "0x9", "0xc",
  "0xc", "0xe7", "0xe7", "0xf3", "0xf3", "0xf", "0xf", "0xf",
  "0xf", "0xf", "0xf", "0xc3", "0x99", "0x99", "0x99", "0xc3",
  "0x99", "0x99", "0x99", "0x99", "0xc3", "0xf", "0xf", "0xf",
  "0xf", "0xf", "0xf", "0xc3", "0x99", "0x99", "0x99", "0x99",
  "0x83", "0x9", "0x9", "0xc", "0xe3", "0xf", "0xf", "0xf"
}
```

```
void redirect(file)
char *file;
{
    FILE *redir = NULL;
    char line[1024];
    redir = fopen(file,"r+");
    line[0] = '\0';
    while (fscanf(redir,"%[^\n]s",line) !=EOF) {
        fgetc(redir);
        printf("%s\n",line);
        line[0] = '\0';
    }
    fclose(redir);
}
```

```
main () {
int num;

FILE *fp = NULL;
FILE *out = NULL;
FILE *outxbm = NULL;
char numb[7];
char hold[8] = "00000000";
```

```
char cc[] = "0";
int len;
int holdlen;
int x;
int y;
int c;
int i;
```

```
/** change to the file that holds your numeric
    counter value **/
```

```
fp = fopen("/httpd/docs/count.txt","r");
```

```
fgets(numb, 8, fp);
```

```
fclose(fp);
sscanf(numb,"%d",&num);
num++;
```

```
/** change to the file that holds your numeric
    counter value **/
```

```
out = fopen("/httpd/htdocs/count.txt","w");
```

```
/** change to the file that you want your image saved
to, must end in .xbm though */
```

```
outxbm = fopen("/httpd/htdocs/count.xbm","w");
```

```
fprintf(out,"%d",num);
fclose(out);
```

```
len = strlen(numb);
```

```
for (i=0; i<len; i++)
{
    hold[8-len+i] = numb[i];
}
```

```
fprintf (outxbm, "#define count_width 56\n");
fprintf (outxbm, "#define count_height 16\n");
fprintf (outxbm, "static char count_bits[] = {\n");
```

```
for (x=0; x<16; x++)
{
    for (y=1; y<8; y++)
    {
        cc[0]=hold[y];
        sscanf(cc,"%d",&c);
        fprintf(outxbm,digits[((c*16)+x)));
        if (y<7) { fprintf(outxbm,", "); }
    }
    if (x==15) { fprintf(outxbm,");");}{fprintf(outxbm,"\n");}
}
fprintf(outxbm,"\\n");
printf("Content-type: text/html%c%c",10,10);
```

```
/** change to the file that you want redirected with the
counter in it! This file should have a
<img Src= reference to the .xbm file you
specified in the outxbm above. */
```

```
redirect("/httpd/htdocs/test.html");
}
```


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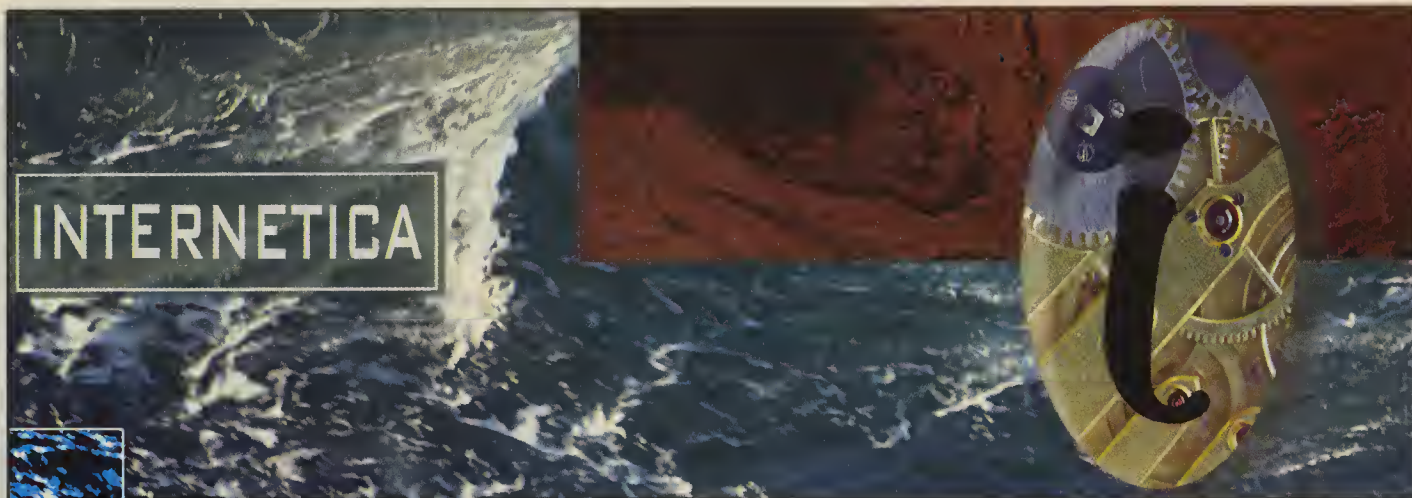
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DIGIPHONE – VOICE PHONE OVER THE INTERNET

by Jack Rickard

One of the viscerally engaging things about the Internet really has to do with long distance telephone service. A data connection across country, or even internationally via the Internet costs the same as a connection across the room. You pay for a connection to the Net, typically a buck an hour or so, and from there, Tasmania is the same as Illinois. The holy grail of online communications from its first day has been this concept of FREE LONG DISTANCE — beating the telcos out of their pound of flesh. And it still has a lot of life as a motivating factor.

And on the Net, as they say, “packets is packets.” The implication is that anything that can be digitized can be passed as data. So one of the obviously interesting applications would be packetizing voice data and using the Internet as a voice telephone system — allowing free long-distance voice telephone calls.

Last March, a company called Vocaltec (<http://www.vocaltec.com>) introduced a product they titled *Internet Phone*. It allowed you to use a sound card and a microphone to communicate by voice over the Internet. The product was clunky, half-duplex and used IRC servers to “register” your existence as having this software. But it did a passably good job of passing intelligible voice data over the Internet - even over 14.4 Kbps dial-up connections. We predicted at the time that this concept would catch on big time despite the clunky state of the art of the moment.

And it appears that it has. A company called Camelot, through their subsidiary Third Planet Publishing, announced a full-duplex Internet phone last April and then repeatedly delayed production of the product. Half-duplex operation works like a speaker phone or CB radio: one person talks, the other listens. Full-duplex works like an ordinary phone, you can both talk at the same time and no one has to listen at all. VocalTec, noting the desirability of this full-duplex concept, actually released an upgrade purported to be full duplex. In fact, it was full duplex if you used a single obscure sound card — or if you wanted to install TWO of the more popular

Creative Labs Sound Blaster cards. This landed with a pretty dull thud.

Quarterdeck Office Systems (<http://www.quarterdeck.com>) has announced they intend to release a product called *WebPhone* by October through retail channels at about \$50. It is purported to be full-duplex in operation. And recently, long distance telephone carrier IDT, of Hackensack, New

Jersey, announced they were not only introducing but also filing for a patent on the concept of bridging Internet voice phones to the existing voice telephone network. This company actually invented the concept of overseas call-back long distance — where you telephone an 800 number in the States and enter your overseas telephone number. The system calls you back — taking advantage of the serious price differential between calling overseas from the states, and calling the states from overseas. Their latest concept is to set up a switch that you can contact over the Internet, and use it to dial OUT to the regular analog telephone network. IDT Internet Services: (201)883-7949.

We had requested a copy of Third Planet Publishing's *DigiPhone* last April, and were assured almost weekly

from April to October that it was just about ready. We did finally receive a copy of Camelot's DigiPhone. It's fascinating. But it's still not ready. This product is much more in line with what we'd like to see, but it suffers from some installation setbacks sufficiently serious that we think many will be dissuaded from using the product.

Most of the difficulty is not likely DigiPhone's fault. But their timing couldn't be worse. Windows95 was introduced in August. And while we're very enthusiastic over this operating system upgrade, it has virtually thrown hardware compatibility into a hurricane of confusion. Rather than simplifying the world with the “plug and play” concept, it has confused it even further.

Peripherals such as sound cards, video capture cards, scanner cards, etc. that are NOT plug and play now do indeed qualify



as a total nightmare. Creative Labs (<http://www.creaf.com>), for example, basically owns the market for sound cards with their Sound Blaster 16 and AWE-32 sound cards. They are so dominant in the market that they comprise de facto standards for sound on the PC. But as of October, they act totally surprised that there IS a Windows95 now, that anyone would run it on their computer, and most of all, that anyone would want to run one of their sound cards under Windows95.

The problem extends to video capture cards, scanner cards, and virtually all hardware add-on cards and of course much of the software world as well. Everyone is scrambling to release Windows95 compatible versions. And there is much more scrambling than release. Since the Win95 beta program went on for a year with some 400,000 copies floating around out there, we're not sure all this apparent surprise is in order. But it is causing chaos.

Third Planet has finally released the DigiPhone product and they intend retail distribution at a suggested list price of **\$89.95**. Shipments began September 15 and the company claims they have already received \$2,000,000 in advance orders from chains including QVC, Home Shopping Network, Adventure, Babbage's, Computer City, Club Biz, Elek Tek, Fry's Electronics, Futureshop, J&R Computer World, London Drug, Media Play, Micro Center, and Software Etc.

THE GOOD NEWS

DigiPhone has a lot to recommend it and it does constitute a significant leap forward in this product genre. The sound quality is really quite remarkable. And the design of the program in operation is really what we were looking for. We wanted a product that treated IP numbers as telephone numbers, and otherwise approximated the use of an ordinary telephone quite closely. This one does. Unlike Internet Phone — which requires an IRC server as its intermediary — you can dial another DigiPhone user quite directly.

Once installed, DigiPhone can sit on your Windows 95 task bar running in the background, quite ready and willing

to accept a call over the Internet. When you receive one, it causes a ringing noise from the sound card that is loud and sounds remarkably like a telephone. Actually, the CD-ROM that comes with the product contains dozens of noises you can use for the ringing sound, from foghorns and cows mooing to car horns, church bells, etc. But we loved the **RING.WAV** that comes as the default. A little panel pops up that indicates who the call is from — essentially caller ID — with an **ACCEPT** and a **REJECT** button. If you click **ACCEPT**, you are connected and can hold a conversation.



To place a call, you simply right-click the **DIGIPHONE** icon on your task bar. There are several selections for setting various aspects of the connection, but the top one allows you to place a call. If you click this, you can then select a person from your phone book. The phone book is very simple and easy to use. It lists names and e-mail addresses. Under **ADVANCED DIRECT DIAL CONFIGURATION** you can enter an **IP RESOLUTION RANGE** with a **HIGH IP** number and a **LOW IP** number.

This is a very interesting twist. Many of us access the Internet via dial-up PPP accounts where the IP number is assigned at log on. DigiPhone can attempt a connection at each of a number of IP numbers, in an attempt to find another copy of DigiPhone with the **NAME** of the same person you have listed in your phone book. It is somewhat important that you have the **SAME** name in your phone book as they have in their DigiPhone configuration. For those with permanent IP addresses, you can speed the process by entering the IP number as both the high and low limits of the range.

Once you have selected a person from the address book, you click on the **CALL** button. A little light flashes **CONNECTING** while the phone at the other end rings. If they accept the call, you get a **CONNECTED** indication. Two simulated 10-segment LED light bars indicate

sound strength both for outbound sound and incoming sound.

VOICE QUALITY

Unlike the standard analog telephone set, DigiPhone in combination with your sound card allows endless tweaking of the sound quality. I guess I think we need some further development here. We spent hours tweaking microphone levels, speaker volumes, bass, treble, sample rate, compression, etc. You do need the mixer application from your sound card up and running to make this work.

DigiPhone itself has a couple of interesting settings. First, under **CONNECTION**, we have a sample rate, compression, and encryption options. Sample rate can be set between 4,000 and 44,000. This is the number of times per second that the software samples the audio waveform to convert it to digital data. We found sound quality at 35,000 to be excellent.



But note that the higher the sample rate, the more data generated, and that must be packetized and transferred over the network. Voice was intelligible if a bit buzzy at 8,000 and really quite good over 20,000. At 35,000 it is actually much better than an analog telephone and it worked well at that rate over a 10 Mbps local Ethernet and over a 1.544 Mbps T1 link to Chicago. This does not indicate sterling performance via a 14.4 kbps modem. But if you don't mind a bit of buzz at 8,000 it should work sufficiently well on a 28.8 kbps modem.

The compression selection offers **STANDARD COMPRESSION** and **NO COMPRESSION**. We have no idea what compression is being used, but would note that it is insufferable. We never got any kind of connection where voice was intelligible when compression was set to standard. No compression made a world of difference, but again increased the volume of data traffic.

ENCRYPTION refers to a feature where you can enter a key at both ends and

DigiPhone will scramble the voice data so that only those with the key can understand it. Interesting feature.

There is also a **VOX** setting. VOX refers to Voice Activation levels. This is the level at which noise in the microphone is detected, packetized, and transmitted. Basically, it is an adjustment of microphone sensitivity so you are not constantly transmitting background noise. In full duplex, it really hoses things up and a setting of 0 is necessary to keep from chopping up your conversation into unintelligible gibberish. It's nice they provided an adjustment, but on our systems, it was in an unusable range. Zero was all that worked.

Overall, we found the necessity to play with our sound card mixer settings, the sampling rate, the compression, and VOX to be a bit more complicated than should be necessary for voice communications. Some of the settings were quite touchy. One minute we would be nearly unintelligible, and the next, sound would be almost mellifluous.

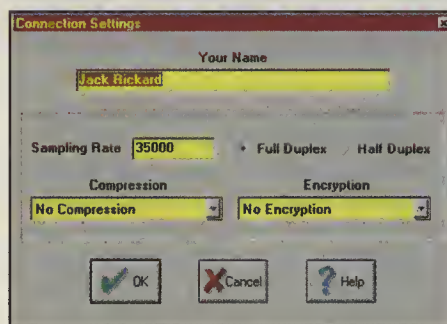
Worse, Third Planet has let their greed destroy the functionality of the product. There is no reasonable way to adjust the sound by actually calling someone who is remote and talking to them over the set. And there is no way to locally tell what you are going to sound like without actually doing a connection. We set it up on two different computers in our office, and basically ran back and forth, discussing different strategies for setting the sound values and did eventually trim it out to not only a usable level, but actually a remarkable level of quality.

In the process, we discovered that you cannot use one copy of DigiPhone to call itself. It rejects the call if it detects that it is from the same copy of the software. This is built into the software and has nothing to do with serial numbers entered. So to test it locally, we had to come up with TWO copies of the software. While sympathetic to their desire to minimize software piracy, the program is essentially unusable in a single copy. Plan on buying two copies to play with until you get your sound levels working, or working on this with a friend.

We did find one other feature interesting. The program does use e-mail effectively. First, you fill out a personal information panel to "register" the program, and a mail server. It then sends the e-mail registration to Third Party Publishing. This is not optional and does

seem obnoxious. But Third Planet Publishing actually maintains a global directory. If you know someone's e-mail address, you can try to connect to them. The program rather naively assumes that the e-mail host will have some relationship to the caller via a vis IP number, and will try to locate them across the net automatically and make the connection. If it fails, you can send an e-mail query to the global directory. You will receive a reply with the IP number by electronic mail. Not operational at this writing, you will also be able to query the directory via World Wide Web at <http://www.planeteers.com>.

Additionally, if you try to connect to someone, and get no connection because their machine is down, not connected to the net, or whatever, a pop-up screen gives you the option of sending them an e-mail address. You don't really draft one. It just sends some boilerplate text noting that you tried to call.



INSTALLATION NIGHTMARES

We installed DigiPhone on two Windows 95 machines and one Windows 3.1 machine. Were it not for our enthusiasm over this product genre, we would have tossed the program and the article as "uninstallable by humanoids." With four calls to technical support, a couple of faxes from them, and a FULL DAY, we did manage to get the program more or less operational.

The company claims the program works with Windows 95. We think this is a bit disingenuous. I suppose we are running Windows 95, and talking on the DigiPhone. But it is very ugly.

First, we had to completely remove ALL 32-bit sound drivers from the Windows 95 machine. This disables most of our sound card software. Secondly, we had to reinstall our Creative Labs AWE-32 (a 32-bit version of the SoundBlaster 16 card) software from scratch. That meant overwriting July 1995 files with January 1994 files in the process. We then had to modi-

fy **AUTOEXEC.BAT** and **CONFIG.SYS** files so that the old 16-bit drivers were loaded BEFORE loading Windows95. And finally, we had to edit **SYSTEM.INI** by hand to make sure the software could detect that the drivers existed. And finally, we re-installed DigiPhone.

None of this was described in any of the literature or the user guide. The user guide in fact indicated that it did work with Windows 95. This documentation was sufficiently terse to be useless.

Fortunately, technical support was actually quite supportive, and they faxed us an install procedure, complete with a printout of their **SYSTEM.INI**, **CONFIG.SYS** and **AUTOEXEC.BAT** files. With all of that, the full-duplex driver did work.

The program does crash periodically and to no particular pattern we can detect. Most annoyingly, at times incoming calls crash the entire system and lockup the Windows 95 machine that is supposed to be so resistant to such lockups. If you are working on a document and receive a telephone call that blows up your computer, you'll find yourself somewhat disinterested in what the caller has to say.

For beta software in the hands of Net veterans and distributed online, this would be interesting if a bit perverse. For a product distributed in a beautifully designed box on the retail shelf at **\$89.95** to an unsuspecting public, it is more akin to a criminal act. This software is simply not ready for prime time. The design of the program and its operation are very engaging if slightly glitchy. The sound quality is truly marvelous and if you can get it up and running and adjusted, it really is quite like using a telephone and you can communicate over the Internet quite well.

But the copy protection and installation issues are just gruesome. And the crashes are not tolerable. We'll watch hopefully for improvements to this fascinating product over time. A DigiPhone Deluxe version, scheduled to be released soon at **\$149.95** adds voice answering-machine and conference calling features that should be quite welcome. Camelot Corporation, which also owns the Mr. CD-ROM Stores, Inc., is publicly traded on the NASDAQ under the symbol CAML. Third Planet Publishing, Inc., PO Box 797728, Dallas, TX 75379; (214)713-2630 voice; (214)713-7613 fax; <mailto://custserv@planeteers.com>; <http://www.planeteers.com>. ♦

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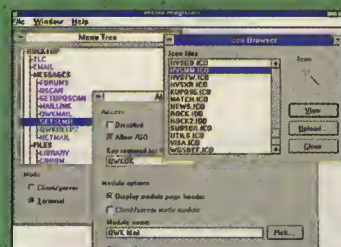
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DR. BOB

by Bob Rankin

SCOTT YANOFF – KEEPER OF “GOOD STUFF”

They say no good deed goes unpunished — but is there a different reality in the online world? Scott Yanoff is a good example of the fact that the citizens of cyberspace know how to reward the good guys.

Just over 4 years ago, Scott slapped together a list of six things he thought were pretty cool on the Internet. Back then, there was no Yahoo, Galaxy or Lycos. We're talking ancient history, pre-Mosaic, green-on-black command line stuff here, folks.

So the idea of a list of pointers to the “good stuff” out there in the dark reaches of cyberspace sounded pretty good. After posting the list on USENET, Yanoff was deluged with additions and the 21-year old Computer Science student at the University of Wisconsin-Milwaukee was stuck with the task of maintaining the now ubiquitous Internet Services List.

Even though the Web and Yahoo-like listings are all the rage today, most every newbie knows that Yanoff's Internet Services List is still one of the best places to go if you're looking for something, or just plain curious about what's out there. The fact that it does pre-date the Web makes Yanoff's list particularly useful even today because it contains pointers to telnet, ftp and gopher resources that you won't find anywhere else.

The List is organized in topical fashion, with headings such as Astronomy, Business, History, Literature and Music. But the most wonderful thing is that you can actually read through it from start to finish in an hour or so. Yanoff has done an excellent job of keeping the list down to a manageable size, and in the age of information explosion, “Short Is Good.”

I visited Scott's home page on the Web, and was impressed by the lack of glitz. It paints a picture of a guy who writes code, speaks German and apparently

has a life off the Net. Let's talk to Scott for the scoop on how the List has changed his life, and how the Net is changing too.

***Doc:** Scott, yours is one of the most widely-read documents on the Net. Tell us how you got into the Internet game, and the history of the Internet Services List.*

Scott: I started my Internet Services List 4 years ago this past September, as an undergrad at UW-Milwaukee. I started it as a personal list of about 6 items and after posting

A year ago I didn't know HTML — now I am a system administrator and head web developer.



Scott Yanoff, Author of The Internet Services List

ing to USENET, people mailed me with additions and before I knew it, I was maintaining this “Internet Services List.” I estimate its readership at about 500,000+ as it is released on a bi-weekly basis.

***Doc:** I see from your e-mail address that you're still at UWM. What do you do to keep busy when you're not editing the List?*

Scott: I am currently working on my MS in Computer Science at nights while I work full-time for SpectraCom, Inc. — <http://www.spectracom.com> — as Director of Web Development.

***Doc:** What are the most significant changes on the Internet since you started the Internet Services List in 1991?*

Scott: The most significant is the advent of commercialism, and the supposed “acceptance” (or takeover) of commercial sites. Along with this, the most significant changes would be the popularity and growth of the World Wide Web. In fact, a year ago I didn't know HTML and now I am a system administrator and head web developer for SpectraCom, Inc. here in downtown Milwaukee.

I think the simplicity of the “point-and-click” interface the web uses has really contributed to the widespread use of the Net, and the new medium provides a new way for commercialism to creep into another part of our lives.

***Doc:** You recently received a “TOP 5% OF THE WEB” award from Point Communications for your*

Bob Rankin, known as “Doctor Bob” in the online world, is a writer, computer programmer and consultant who enjoys exploring the Internet and sharing the fruit of his experience with others. Bob is co-driver of *The Internet TourBus* and author of “Accessing The Internet By E-Mail”, which has circulated widely on the Internet, and is available in 15 languages. Send e-mail to BobRankin@MHV.net or visit him on the web at <http://csbh.mhv.net/~bobrankin>

list. What kind of feedback do you get from readers around the world?

Scott: About 99.9% is great — I really get my ego fed by the users of the list. The award is a great honor, the first I can really say I have received officially. It is a joy to make the list when I know people have a use for it. It also helps when I am having thoughts of quitting doing the list that people write me and tell me how much it helps them.

Doc: *Has all of this attention presented any unique problems or opportunities for you?*

Scott: Everything has problems, but I really have been blessed with this list. It has become my “bread and butter” — garnering me many speaking engagements, a spot on a PBS TV show, and a mention in Newsweek. And of course, the job I currently have.

Doc: *What do you find most interesting or useful on the Net? Any favorite online hangouts?*

Scott: I barely have time nowadays to maintain the list let alone have time to surf. I really like sites that are colorful and provide great information, such as the weather sites, or the news-related sites. My home page at SpectraCom lists my monthly favorites.

Doc: *Have you ever sent your credit card number over the Internet? Is it a significant risk?*

Scott: I have not done this. While I really feel it is just the same as speaking it into the telephone, I just have not seen anything on the Internet I would actually buy.

Doc: *Tell me about one person you admire for their contributions to the Internet.*

Scott: Ed Krol, author of *The Whole Internet Users's Guide & Catalog* (O'Reilly & Assoc., ISBN 1-56592-025-2). This was one of the first books on the Internet, and he sold at least 250,000 copies, which is no easy feat for a computer-related book.

Doc: *We've seen tremendous gains in the ability of ordinary people to access online information that was never available to them before. How will this change Society? Government?*

Scott: Who knows? The possibilities are endless... more people will conduct online business, ordering, and personal contact. As far as the government goes, online voting could be a possibility if secure features were ever implemented for such a thing, and if society accepted it.

Doc: *Is there such a thing as Net Culture? If so, how would you define it?*

Scott: Every society or race has a culture, and the Internet is certainly no exception. Net culture is defined by the netizens who create the netiquette. It seems to be changing rapidly. Who would have thought 2 years ago that you'd see Zima ads splattered all over the Internet on web sites? It's best defined by the current technology relating to the Internet and how people are reacting to it.

Doc: *Is Gopher a dead end? Will the Web rule the Net forever or do you foresee another quantum leap in information presentation technology on the horizon?*

Scott: The Gopher program was a great invention. Unfortunately, the Web has

turned gopher into roadkill. It was a fantastic search utility, but honestly, now it is an extinct animal.

Doc: *If you could make one sentence appear on the screen of every Internet user on December 31st, what would it be?*

Scott: “We know no borders on the Net, so why should we in real life?” Happy New Year! ♦

I just have not seen anything on the Internet I would actually buy..

CONNECTING WITH SCOTT YANOFF

<mailto:yanoff@csd.uwm.edu>

<http://www.cs.uwm.edu/public/yanoff/yanoff.html>

How to Get The Internet Services List

<ftp://ftp.csd.uwm.edu/pub/inet.services.txt>

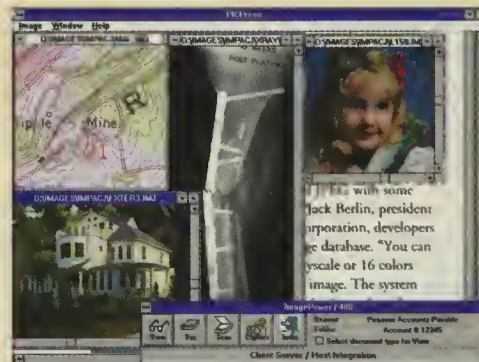
<http://www.uwm.edu/Mirror/inet.services.html>

<news:alt.internet.services>

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ISP TALK

by Bob Rankin

SID — The Southeastern Information Depot

Meet SID, the InfoBase of the South. SID is a large database of information specific to the 12-state region of the Southeastern U.S., as well as a dialup service that offers free Internet access via their system located in Atlanta, Georgia.

The SID BBS — (770)612-1500 or telnet://sid.net — offers a place where people can talk about issues pertaining to the South, as well as free access to Internet e-mail, ftp, gopher, lynx, etc. There are also file libraries, an impressive collection of news sources, weather, and games online, but some options do require a membership.

FOUNDING FATHER

Mike Adkinson, developer of SID, is no stranger to the publishing business. Adkinson is founder and president of Jaye Communications, Inc., the southeast region's largest publisher of technology-related information and publications. JCI publishes *Atlanta Computer Currents* and the *Georgia Technology Sourcebook*, but SID was their first foray into the online publishing arena.

"Being in the publishing business, it was becoming apparent that we needed to see the online industry as a new medium for publishing," says Adkinson. "If this was going to become a new channel for providing information to the readers (consumers) then we needed to get into it and learn how to use it rather than just sit back and worry about it doing damage to our magazine."

The motivation for selecting Dixieland as the subject of his online venture comes from a love of the region that goes back to his roots. Adkinson says "I grew up in the South and didn't really leave until I had finished school. I wanted to be a part of any effort that could help people from this area meet and have opportunities to know people from around the country and the world — that is a part of what SID can accomplish as we grow."

Prior to founding JCI, Adkinson established America's Performance Group, Inc., a consulting service focusing on strategic corporate planning. He served as a consultant to many corporations including the Ford Motor Company, AT&T, and the N.Y. Stock Exchange, so he knows that it takes more than warm fuzzies to make a business succeed.

"There was no local online service in Atlanta that was targeting the needs and interest of the local community, and there certainly wasn't one that focused interest on the Southeast," Adkinson told me. "I felt that we were in a good position to get this started because with our local magazine (*Atlanta Computer Currents*) we were well equipped to attract the computer users of the area. And for sure this would be the group that could offer the best suggestions on how to fix problems and make changes to improve how the system should operate. We were right on this one — they really let us know when something needs to be changed!"

THE SID WEB SITE

Perhaps the most impressive part of SID is their World Wide Web site at <http://www.southeast.org>, which presents a

spiffy point & click interface to a well organized set of business, education, government and leisure-related links. Let's take a quick tour:

Selecting the first option, BUSINESS, presents you with a list of 12 states (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia) to choose from.

I gave Florida a poke and found myself looking at a category list including Agriculture, Chambers of Commerce, Employment, Industry, News, Real Estate, Technology, and Trade. A few more clicks in the Employment area revealed FEDERAL JOB OPPORTUNITIES: "Meat Cutter - Military Base." Hey, not bad!

Under the Government heading, I picked the state of Georgia then selected category CENSUS INFO, where I found that the per capita disposable income of Georgia residents is \$14,546. Maybe the free Internet access is more of a necessity than a nicety in that state.

The LEGISLATURE selection brought up a nice photo montage of the entire Georgia Congressional Delegation, along with addresses, phone numbers, committee memberships, and relevant e-mail and gopher addresses.

After trampling through an endless list of Southern elementary schools, high schools, and colleges, I ended my SID tour by selecting the LEISURE heading. Following the path through Kentucky to Lodging brought me to a really cool Holiday Inn Listing that even handles online reservations.

With region-specific listings of Museums, Parks, Sports, Travel, and Weather it would seem that a modem is the only thing needed to plan a vacation nowadays. Say goodbye to the old Rand-McNally tour book and the Mobil Travel Guide next time you're planning a trip to the South.

WEB SERVICES

SID also offers services to business, government and others who are interested in creating a "virtual headquarters" on the Web. They can assist in the design, creation, and hosting of web pages. Custom graphics and Web page promotion services are also offered.

You might want to exercise a bit of caution when discussing business ideas with SID using e-mail. The Feedback button on the SID web page has a really scary-looking disclaimer which states that "S.I.D. shall be free to use any ideas, concepts, know-how or techniques contained in such information for any purpose whatsoever, including, but not limited to, developing, manufacturing and marketing products incorporating such information." You just have to hope that was written by a lawyer, and that these are nice folks after all. ♦



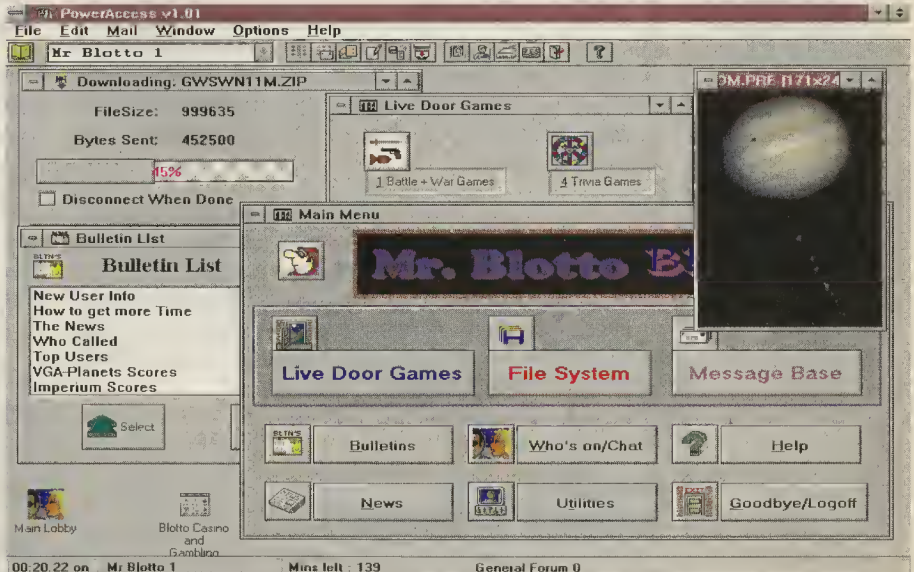
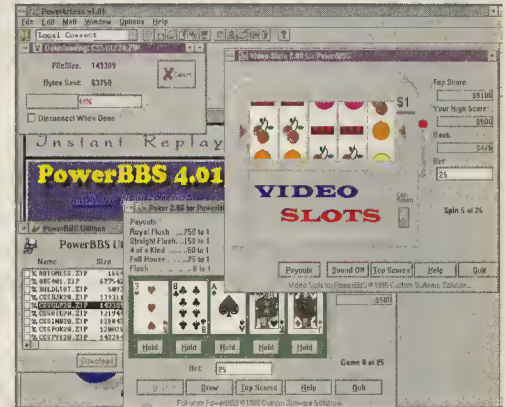
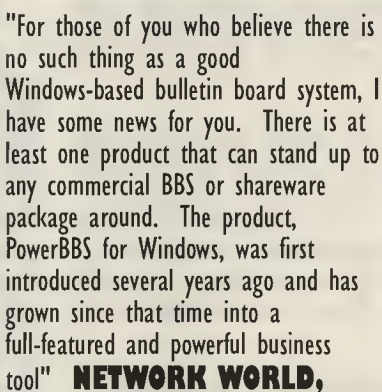
Mike Adkinson,
SID founder

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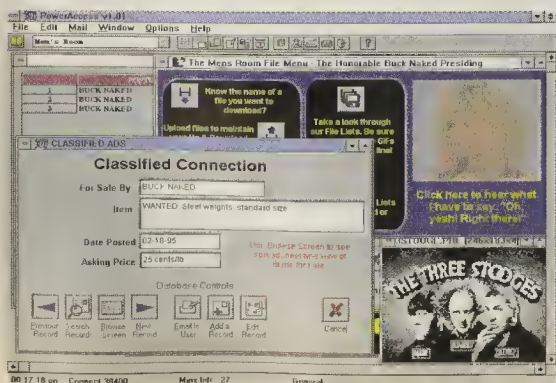
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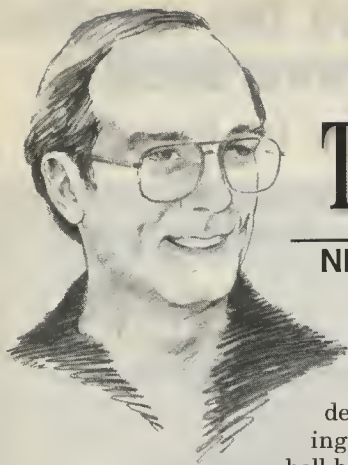


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THE COMPLEAT INTERNAUT by David Hakala

NETSCAPE 2.0 WITH JAVA: CAFFEINE JITTERS ON THE WORLD WIDE WEB

It's time to speak out against the myth of the century. Software developers are *not* in the business of enhancing productivity! They are devious Luddites, hell-bent on impeding progress. Ignore all of their propaganda; just look at their actions and their effects on society.

David Hakala first appeared in *Boardwatch* in February, 1989. From May of 1991 until he assumed the position of Editor at *Fault* at *BW* in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book *Hot Links* with Mark Eppley, CEO of Traveling Software, and penned his own book, *Modems Made Easy*, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at mailto:david.hakala@boardwatch.com or at (303)973-6038.

Software vendors love to hook end-users on products that promise faster, easier and more powerful whatever-you-do-with-computers. Sadistically, they even refine said products to a relatively high degree of reliability and utility. But then they "dramatically improve" things so that no one can get any work done.

Microsoft has done it to us again and again. MS-DOS 5.0 worked just fine; then DOS 6.0 wreaked havoc throughout the computing world. Just as we all got Windows 3.1 working, along came Windows 95. Several centuries of labor time have been lost since August 24, as millions of people fruitlessly searched for their File Managers and the "Easter Egg."

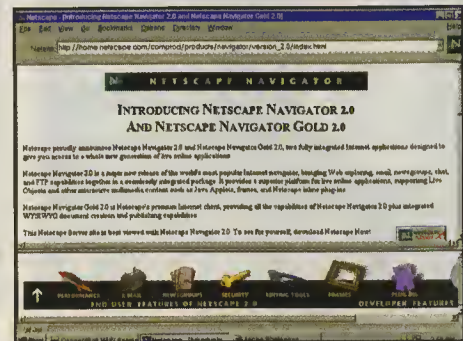
Every time a "major breakthrough" in software is introduced, all but a few sectors of the economy just plain stop while everyone tries to figure out why their computers no longer work. The only ones who prosper are the advertising and public relations agents, trade publishers, telecommunications services, factory-authorized trainers and of course the software peddlers themselves.

The whole thing is a conspiracy between programmers and their sycophants to distract the rest of us from accumulating wealth. Their sinister purpose is to eliminate competition for money by keeping most of us semi-competent, earning just enough money to buy more software and skills that they plot to make obsolete in just a few months.

Fiendish, isn't it?

NAVIGATOR 2.0: SIMPLICITY "COMPLEXIFIED"

Netscape Communication Corp. joined the conspiracy when it released version 2.0beta of its Navigator web browser on October 5. Only we're not supposed to call Navigator a "browser" any longer; officially, it's now "an applications development platform that has some of the characteristics of an operating system," or APDPHTSOTCOAOS. Shades of a tongue-tied Bill Gates — here's another program that can't be described in plain English, even by its creators!



Only the purpose of this elongated acronym is clear: to focus attention on the company's server products, where the real money is. The browser has always been freely given away in a beta form that works so well there's been no pressing reason to pay \$49 for a "commercial" version. The browser is a loss-leader; Netscape maintains about 2000 in-house FTP ports, which are chronically jammed by freeloading browser suckers. Netscape aims to cut its browser losses by adding web page authoring tools to a commercial-only version dubbed Navigator Gold, but even at \$79 that won't amount to a drop in the bucket. Registrations of Navigator 1.1 and 1.2 reportedly have brought the company several million dollars, but that's peanuts compared to the bucks to be made in servers.

The purpose of the browser giveaway was to create a multimillion-user pull-through market for Netscape's server products. However, that market is anything but impermeable to competition. Any savvy programmer can write a Navigator-compatible web server and sell it for \$500 or less. The key to keeping profits in the family is to continually "enhance" the servers and the browser with temporarily proprietary features — even if the perceived utility of those features is largely an illusion of marketing hype.

So it is with Navigator 2.0. A plethora of new features are included. Some, like e-mail and newsgroup functions, are already better served by other programs. But some unique features have been added, a few of which may actually prove useful once they work.

PROGRESSIVE JPEG

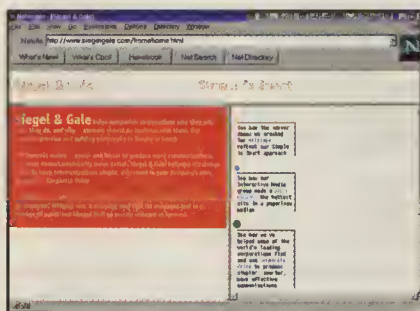
JPEG image files are 3-4 times smaller than GIFs of nearly equal resolution, so they download and display much faster than GIFs at any given connect speed. "Progressive" image display means that an image is delivered in several iterations, each of higher resolution than the last. The theory is that users want to see a whole image, no matter how grainy, as quickly as possible so they can decide whether to

abort the download or finish retrieving the whole file. Progressive GIFs have been around for over a year; now Navigator supports progressive JPEGs. They actually produce a tolerable image faster than their GIF counterparts, but I still call it "progressive eyestrain."

FRAMES AND LEDGES

Manufacturers of oversized video monitors will be the primary beneficiaries of these "enhancements." Frame technology allows a web page developer to split the user's screen into two or more independently scrollable windows. One window might contain a table of contents, for example. Clicking on a line item causes the referenced portion of a document to appear in another window, where you can scroll through it. The table remains available in the first window and you can scroll it in two or four directions too. This procedure is marginally more intuitive and efficient than the standard practice of flipping back and forth between whole pages using the Go Forward and Go Back buttons.

But the utility of frames is negated by the loss of usable display space to window borders, scrollbars and document margins. Already, a couple of dozen web sites have implemented frames in spectacularly ugly forms. My favorite example is the Siegel and Gale advertising agency homepage — <http://www.siegelgale.com/framehome.html> — with its ironic slogan. If "Simple is Smart," then frames are stupid.



Frames — a waste of space

Frames and ledges are programmed using a new set of tags and attributes. The `<FRAMESET>` and `</FRAMESET>` tags replace the `<BODY>` and `</BODY>` tags as the "container" for a frame's code. The size of a frameset can be specified by **ROW** and **COLUMN** attributes, in either absolute pixels, percentages of available space or dynamically allocated relative frame sizes.

A **NOFRAMES** set of tags is provided to display alternative information for the

"frames challenged" browser. A frames-enabled browser will ignore all data between the `<NOFRAMES>` and `</NOFRAMES>` tags.

There may be several frames within a frameset. The `<FRAME>` tag is used to define a given frame. Its six attributes include

- **SRC="url"** — the URL of the document to be displayed in the frame.
- **NAME="window_name"** — a name assigned to a frame, which can be targeted by links in other documents.
- **MARGINWIDTH** and **MARGINHEIGHT** — allow specification in pixels of how much space to waste around the document displayed in a frame.
- **SCROLLING** — may be "yes," "no" or "auto" to control whether scrollbars always or never appear, or whether the browser adds scrollbars as needed.
- **NORESIZE** — when inserted, this tag prevents the user from resizing the frame window.

A "ledge" is just a frame that cannot be scrolled or resized by the user. The most likely application is to let advertisers stay in your face, something sponsors and webmasters who rely on ad revenues have said they wanted for many months. The World Wide Web Consortium's Internet Engineering Task Force is sorely divided over whether to include a ledge-like feature set in the official HTML specification. Netscape, true to its maverick character, has jumped the gun.

INLINE PLUG-INS

Navigator — like most other browsers — allows the addition of "helper applications," third-party programs which display, play back or otherwise process data files that the browser does not inherently support. The **NAPLAYER.EXE** utility included with Navigator is an example of a helper app; it plays several types of sound files. Net Toob is a real-time MPEG player (see our November Telebits) that can be hooked into a browser as a helper app. Adobe's Acrobat viewer allows display of PDF document files.

Helper apps make a browser highly extensible, but each helper app has its own interface which the user must learn and remember. A helper app pops up, does its thing, and then must be closed in order to return to the browser. These are not major drawbacks, but they do detract from the "seamless simplicity" of a browser.

Navigator 2.0 addresses this "problem" with its inline plug-in API. Using new HTML extension tags such as **EMBED**, a web page programmer can insert references to a variety of data types, and finely control how each referenced data file will be processed. A plug-in application may be totally invisible to the user. A sound player, for example, may simply play a sound file when one is encountered in an HTML document; no pop-up "tape deck controls," just pure sound. An Acrobat document may be displayed in a smaller window within Navigator's HTML window, occupy the entire HTML window or pop up Acrobat in its standalone mode, allowing full access to the viewer's controls.

A plug-in app may also do nothing visible or audible at all. It might process data from the HTML page in the background and output new data which other plug-ins or the browser use as input for further shenanigans.

There is plenty of potential for bandwidth abuse inherent in plug-ins. We can expect to see HTML pages which bombard the browser with lengthy sound, video and "graphically rich" document files. But there is also a rare opportunity to conserve bandwidth hidden in the plug-in concept.

The plug-in API also supports a byte range extension to HTML, which Netscape is also proposing as an official standard. The `url;BYTES=x-y` syntax delivers to the browser a specific range of bytes from the referenced document. Thus, it is possible to retrieve only a particular page or range of pages from a PDF document, instead of downloading the whole document. Given a form that accepts the user's input for the desired page number(s), translates this input into the appropriate byte range and passes the result to the server, it is possible that users could retrieve their own page sets from a large document... or replay a certain segment of a sound file or video clip.

JAVA BETA APPLET

Note the word "Beta" above. Sun Microsystems recently revised the Java API, and Navigator 2.0 can display only applets written in the later version. That is, it can *sometimes* display Java Beta applets — many that we tested with Navigator 2.0B1J blew the browser right back into its Win 95 shortcut — but any applets written for the Java Alpha3 API will be ignored by Navigator 2.0. You'll find a collection of Java Beta applets at <http://www.javasoft.com/applets/>

applets.html to test your Navigator 2.0 and your patience. The 16-bit version of Navigator 2.0 doesn't do Java at all.

What do you get when you cross a Navigator Beta with a Java Beta? Quite a few "illegal operations" that must be "shut down" by Windows 95. (Win 3.1 uses will recognize "General Protection Faults.") Buried several paragraphs deep in one of Netscape's press releases is the understatement, "Users are cautioned that the Java code included is a pre-beta release and may create instability in the user's software." That's why two versions of Navigator 2.0 are available for downloading, one without Java "support" (**N32E20B1N.EXE**).

I tried the Java-free version and it seemed faster and more stable than the Java version. Given the current dearth of significant Java applets – as opposed to the amusing but trivial games and animations – most users can readily do with the additional quirks that Java imparts to Navigator 2.0.

LIVESCRIPT LANGUAGE

Page developers who want programmability but aren't quite up to learning Java may use Netscape's new LiveScript programming language, best described as a "Java for Dummies" syntax that ties together Java applets, user events (such as mouse clicks or page loads), Inline Plug-Ins and HTML. Rather than write detailed Java code for every class, method type safety, developers can rely on applets and new functions built into Navigator 2.0 to handle the nitty-gritty details. A host of system variables, form element names, functions, expressions and operators and statements make

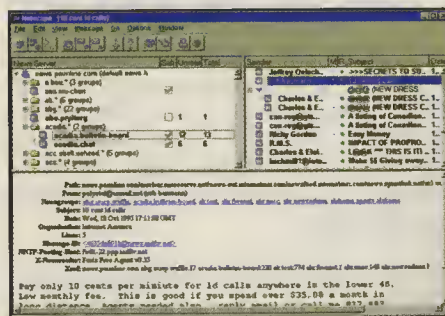
LiveScript about as simple (or complicated) as dBase compared to C++.

LiveScript code can be embedded in HTML documents, using the **<SCRIPT LANGUAGE = "language" SRC=url>** tag to start a script "container." Containers are closed using the **</SCRIPT>** tag. Java compatibility with LiveScript is implemented as a unique Java class called **netscape.nsl** which is part of the Navigator 2.0 Java implementation. The new class provides programmer access to certain functions of third-party applets. Scripts can perform minor miracles like displaying a sunset at dinner-time or a moon at midnight. A reverse-Polish notation calculator at Netscape's web site illustrates user interaction and mathematical functions. Some suggested applications include validating credit cards and ZIP codes; the rest is left to the presumably fertile imagination of the Internet community. Documentation on how LiveScript will interact with plug-ins was not available at press time.

THE BUG BOUNTY HUNT

While I deplore the knowing release of badly broken software to the general public, I nonetheless acknowledge Netscape for a) not charging people for the privilege of being guinea pigs and b) actually offering tangible rewards to users who report "significant" bugs in Navigator 2.0. The "bug bounty hunt" has several rules:

- You must test the Java-supporting version of Navigator 2.0
- You must be the first to report a "severe bug" as defined by Netscape
- Your bug must be reproducible by the company
- You must be satisfied with a coffee mug or polo shirt; 50 of each will be awarded



Security bugs pay better. Any previously unreported, reproducible security bug earns the reporter his/her choice of Netscape's product line. A "severe" security bug may be worth \$1,000 cash! (Of

course, *all* security bugs are severe when they happen – and irrelevant when they don't.)

E-MAIL & NEWSGROUPS

Navigator has long included a serviceable newsgroup reader. Version 2.0 adds a mediocre e-mail program (I'll stick with ConnectSoft's E-Mail Connection for now). Both functions have acquired the ability to embed URLs and Live Objects in messages. Embedded HTTP URLs are very handy; just click on one while reading a message and poof! You're there. The same goes for mailto, news, ftp, gopher and telnet. One minor bug – not even a coffee mug's worth – an **imagemap** URL is not recognized beyond the comma in the map-coordinates pair. This flaw results in an error if one clicks on an image map URL embedded in a mail or news message.

UNFINISHED FEATURES

Navigator 2.0b1 is far from finished. Some new and old features are not yet implemented, and certain glaring but generally harmless bugs exist. The most painful examples are

- There is no Options tab on which one can set external applications such as telnet and TN3270 clients, as there is in previous versions. The release notes indicate that one can install a telnet client by editing **NETSCAPE.INI** (16-bit version) or in the Windows 95 registry.
- You can't post to newsgroups yet.
- Bookmark options **FilePreferences** and **ItemSort** are inoperative.
- Drag-and-drop cannot be used to move mail from your inbox; the menu sequences **Messages|Move** and **Messages|Copy** must be used instead.
- "Time left" in the ftp **Saving Location** window is off by several orders of magnitude.
- The Microsoft Exchange client cannot be used for Mail and News, though it works for news in Navigator 1.2.

CONCLUSIONS

I'm going back to Navigator v1.2N as soon as this article is finished. I'll stay there until Navigator 2.1 comes out. About that time, there may be enough useful (not merely "cool") Java, plug-in and LiveScript applications online to make me feel like I'm missing something. Someone may come up with a utility that imports my E-Mail Connection address book into Navigator's. I'll be ready for Navigator 2.x when it's ready for the market, and vice versa. ♦

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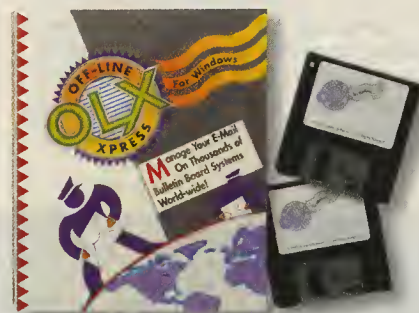
Between now and Dec. 24th, Monterey Gaming System is sponsoring a "Penny Drive" on-line to help collect money for the Starlight Foundation as part of a special holiday season tradition which members of the system share in each year. The Starlight Foundation is an international non-profit organization that helps brighten the lives of seriously ill children and their families through the granting of wishes and related programs. Help us contribute towards this good cause and we'll give you a free trial membership to MGS when you donate any number of pennies and mention this special offer!

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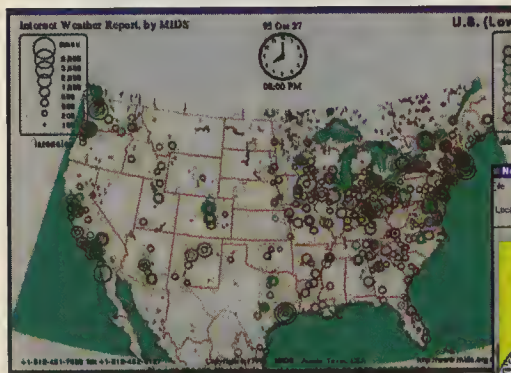
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the scale is 5000 milliseconds or five seconds, with a very quick response time held at 100 milliseconds or about a tenth of a second. This database of geographic locations and ping latencies is then mapped to a graphic of the area, such as the United States. And they further compile these into daily MPEG video animations showing the results of a full day with six frames representing each of the four-hour cycles of the software. The result looks very much like a radar weather map from the evening news. But larger circles show slow response times or "storms" on the Internet. It also tends to depict the areas of high Internet activity geographically. These are just fascinating to watch as a storm rises in the San Francisco Bay area, or Chicago, or the northeast. And it tends to depict the distribution of Internet activity across the map.



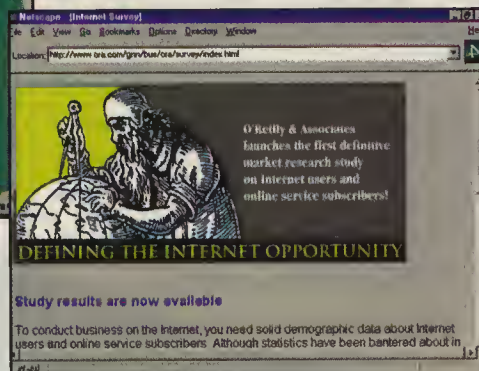
Quarterman also is one of the few to actually ATTEMPT an actual methodology for estimating the number of users per computer, in order to estimate the number of users on the Internet using Lottor's host numbers. He created an electronic mail survey system to send out questionnaires to system administrators across the Internet. The results are self-selected of course, and a tiny percentage of those queried. But he did pick up about 1300 responses last year. And his current estimates put Internet usage at about 22 million people on the Internet, and 35 million on the Matrix.

I would question the figures and the methodology, but applaud his having one. The questionnaires are so gruesomely detailed and esoteric, that we actually found it impossible to complete one accurately without a level of effort that just isn't going to be expended in answering a survey. So I think anyone responding to such a questionnaire in any organization larger than our 25 computers, is simply filling in blanks with guesses to have responded. And all methodologies that rely on self-select

responses may be skewed. Nonetheless, the survey and results have some interesting information in them and you may come to a different conclusion. All are on his web site for your perusal.

THE O'REILLY SURVEY

Absolutely the best and most recent estimate of Internet users we've ever seen attempted is a study titled *Defining the Internet Opportunity, a Multiclient Study*. O'Reilly and Associates commissioned Trish Information Systems to produce this study, published September 27, which we think is the definitive work on the topic at this point. O'Reilly and Associates is a book publisher that has long owned a niche for very technical books of interest to UNIX users and system administrators. More recently, they have entered the software business with a World Wide Web server product titled WebSite, and they have their own online service on the World Wide Web. Florence Kanuk is the product manager for their Online Research Group involved with this study.



METHODOLOGY

The O'Reilly/Trish study is most attractive because of the methodology. They did initially survey 2052 Global Network Navigator (GNN) users. GNN was an online magazine produced by O'Reilly and recently purchased by America Online. But more importantly, between May, 1995, and August 1995, the group used **Random Digit Dialing** to make more than 200,000 telephone calls to randomly generated U.S. telephone numbers. Some 32,000 of those calls resulted in conversations with humanoids and initial screening interviews. This establishes the base of who is and isn't connected to the Internet and to commercial online services. Of those 32,000, a total of 1000 were asked, and agreed to participate in a 35-minute telephone interview to glean additional information about their Internet use and

themselves. An additional 500 were commercial online service users that agreed to participate in a similar interview about themselves. Since these survey questions went into demographics, buying patterns and future intentions, the survey results are not only nearly unassailable with regards to validity, but also strongly projectable.

We loved this methodology for three main reasons.

- It is random.
- It is large scale.
- It is independent of other Internet derived information.

By using Random Digit Dialing as the main select process, along with the random element of some of the numbers being unassigned to actual people, some people not being at home, and some numbers being connected to fax machines, the survey wound up connecting to 32,000 humanoids based on nothing but the generation of the number and someone being available to answer the phone when it rang.

This would yield statistically valid, indeed nearly unassailable results if they did this to achieve 500 connections. The results would not move significantly between 500 and the 32,000 actually called. But the large scale of this, with 32,000 initial screens, is just overpowering. Projected error rates of less than 1% are indicated with such a methodology.

Finally, it is entirely disconnected from the number of hosts, a particular customer list, a particular type of person, a particular income level, online surveys, electronic self select responses, and from any other Internet related thing. We can use it to cross-check anything derived from the Internet to make future projections. It is then, an ideal independent benchmark to use to check and correlate with more easily derived information.

For example, the result was that there are 5.8 million United States adults that have direct Internet access and actually use the Net at their place of work, home, or study. We can project from Lottor's data that about 64% of the 6,642,000 hosts are located in the United States or some 4,228,207 computers. Lottor's number was derived in July 1995 and the O'Reilly numbers were generated in May through August 1995 so they are very contemporary with regards to time. We take these two independently derived numbers to gen-

erate the long sought user/computer factor. It looks like there are actually **1.37174** O'Reilly humanoids per Lottor computer. If this held true world wide, we could see that there are **9,111,096** users world wide. We don't know that it CAN be used world wide and intuitively, we may suspect that there is more computer sharing in the rest of the world, than here. But we'll err on the side of conservatism and know how many users there are if it does hold true.

More importantly, we can use these two independent benchmarks next year. We simply multiply Lottor's new numbers then by the **1.37174** factor again. It will drift and become less accurate over time. But it should work roughly for awhile. It would appear we were conservative with our 1 user per computer guess. But we were a lot closer than the 7 to 10 users per computer guess used to generate the 30 million number you see quoted in every newspaper in the country.

O'Reilly's survey also tells us that **67%** of those with Internet access are **male**, and that the largest age group is **35-44** with **25%** of the survey. The second largest group is the **18-24** age group with **23%**. By income, the largest group is **\$50,000-\$75,000** with **27%** of the population and the median lies in this band as well. Over half of all users (**51%**) earn **\$35,000-\$75,000**. And some **12%** earn over **\$100,000** per year. Some 25% of Internet users work for employers with more than 10,000 employees and 19% work for employers with less than 50 employees. And those appear to be the big ends of the spectrum. Everything in between (50-10,000) is smaller. The largest occupation category is actually **SALES** at **19%** with Engineering trailing at 15%. MIS/Data Processing was actually third with 11%.

COMMERCIAL SITE NUMBERS

You might think that user numbers for commercial online services such as Prodigy, CompuServe, and America Online would be much more easily derived and accurate. After all, Prodigy, CompuServe, and America Online all KNOW how many users they have quite precisely because they charge them for access to the service. Unfortunately, a holdover from the period of e-mail islands has left a culture of "don't ask, don't tell, and if you do tell lie" in the management ranks of these companies.

When e-mail was first becoming commercially available to the general public, you could only send e-mail to another user of the same service.

COMMERCIAL SERVICE POPULATIONS		
America Online	3,800,000	38.65%
CompuServe	3,540,000	36.00%
Prodigy	1,720,000	17.49%
Microsoft Network	200,000	2.03%
Delphi	125,000	1.27%
eWorld	115,000	1.17%
Genie	75,000	0.76%
Mnematics Videotex	65,000	0.66%
ImagiNation Network	62,000	0.63%
Reuters Money Net	33,000	0.34%
AT&T Interchange	25,000	0.25%
Interactive Visual	25,000	0.25%
Digital Nation	15,000	0.15%
The Well	12,000	0.12%
Computer Sports World	10,200	0.10%
Multiplayer Games Network	10,000	0.10%
TOTAL	9,832,200	

CompuServe users could not send e-mail to MCI Mail users, or to Genie users. As a result, when shopping for an online service, everyone wanted to be on the service with the largest body of other e-mail addressable users. An online service was successful and could become more so by having a lot of subscribers and good growth.

So many in the management of these services view their actual usage statistics and subscriber base's as proprietary information. And they make public numbers which are just plainly exaggerations. And in some cases, it depends on what you count.

CompuServe currently claims 3.54 million users. Actually, 900,000 of those aren't really on CompuServe, but on a Japanese online service titled NiftyServe. It uses CompuServe's software, but you can't interact with the users on that service, and if you could, you should have a clear understanding of Japanese before attempting it. Prodigy claims 1.2 million accounts, but a household can have multiple users and so they claim 1.7 million users. AOL is undeniably the worst. They claim trial users, to whom they've mailed an AOL disk, as users on their system. They have achieved some notoriety as the largest service with 3.8 million in doing so. Microsoft said they wanted to open their service at 200,000 and claim they did - refusing to update the number until it's sufficiently impressive that it is in their interest to do so.

If you add up all the larger online service subscribers claimed, it comes to some 9.8 million. The O'Reilly survey indicates a TOTAL of 4.9 million with about a million of those also having Internet access and some 3.9 million having ONLY commercial service access. One element of

this that is quite legitimate is that some online service subscribers actually subscribe to more than one service. For example, I have access accounts on CompuServe, Genie, America Online, Prodigy, and numerous other services. We know from past Boardwatch surveys that there is a very

strong contingent of our readers that have accounts on multiple services. Between the lie factor and the "overlap" factor, it would appear that if you sum up the claims of the commercial online services and divide by two, you are quite close to the real number. The O'Reilly survey indicates that commercial service users are slightly older than the Internet population and with slightly higher incomes with 30% over \$75,000 as opposed to 23% of the Internet population. It is slightly less male at 64% and is otherwise similar.

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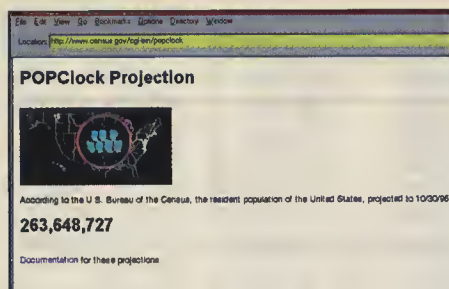
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Finally, the O'Reilly survey did strive to determine what the future growth prospects were. The total online community in the United States would be **9.7 million** users with **5.8 million** on the Internet and **3.9 million** on commercial services only. A quick check of the U.S. Census Bureau's Population Clock at <http://www.census.gov/cgi-bin/popclock> indicates a current population estimate for the U.S. at **263,648,727** humanoids. This indicates **3.68%** of our population in the United States is online via the Internet or a commercial online service. But by surveying those NOT on these services but who planned to get online, O'Reilly projects an additional 6 million online users coming onboard over the next 12 months. This would bring the total to **15.7 million** a year from now or a little under 5.95% of the population.

The Trish/O'Reilly survey is actually available on the web at <http://www.ora.com/gnn/bus/ora/survey/index.html>

WEB USER SURVEYS

We are seeing some very interesting data from World Wide Web user surveys. These are virtually always self-select responses, but some are generating fairly huge numbers of responses and the data does have a great deal of validity despite the self-select nature of the responses.

James E. Pitkow, a Graduate Student Researcher at the Georgia Tech College of Computing's Graphics, Visualization, and Usability Center started a World Wide Web user survey in January 1994. The first survey received responses from 1,500 web surfers. The survey was repeated in October 1994 with input from some 4,000 users and again in April of 1995 with some 13,000 respondents. They are currently doing the fourth survey between October 10, and November 10 1995 and will make the results available on December 12th at http://www.cc.gatech.edu/gvu/user_surveys/

The third survey, held April 10 to May 10, 1995 received some 13,000 respon-

dents. The survey is almost too detailed to summarize usefully. Some highlights:

- **SEX:** 82% of respondents were male, 15.5% were female, and 2.5% undecided.
- **AGE:** The average age for women was 35.15 years old and for men, 35.05.
- **MEDIAN INCOME:** \$50,000-\$60,000.
- **AVERAGE INCOME:** \$69,000
- **MARITAL STATUS:** 50.3% married
- **COMPUTERS:** Windows - 52%, Macintosh - 26.2%, UNIX - 8.8%, all other - 13%
- **BROWSER USE:** 41% use their browser 6 to 10 hours weekly with an additional 21% using it between 11 to 20 hours weekly. 72% access the web at least once per day.

For more information on the GVV WWW User Survey, contact James E. Pitkow, GVV Center, Georgia Institute of Technology, Atlanta, GA 30332-0280; pitkow@cc.gatech.edu

YAHOO SURVEY



One of the most popular sites on the World Wide Web is **YAHOO - Yet Another Heirarchical Object Oracle**. Available at <http://www.yahoo.com>, it is an index of thousands of web sites and fully searchable by keyword. We probably use Yahoo twice a day. In the first week of October, they were claiming some **600,000** "hits" per day on this service.

On October 26th, they released partial results of a survey of **60,000** Yahoo users with some interesting information. First, **55%** of Yahoo users access the World Wide Web from home as the primary access point. But another **35%**, who's primary access point was at work or school, also had some access from home. Even more interestingly, **50%** of respondents noted they access the web through direct dial up connection to an Internet Service Provider. An addition-

al **40%** get their access from work or school. And only **8%** report their primary access is through a commercial online service. Some **42%** of survey respondents have two or more computers in the household. Average time spent on the web per week is **20 hours** and the average session length is **75 minutes**. Some **35%** note the web as their primary online activity while **28%** favor e-mail as their main use of the net. Some **30%** reported an online purchase made during the past six months.

WHERE DO INTERNAUTS GET THEIR CONNECTION?

The other element we find interesting is WHERE are all the Internet direct connects getting their connections. The O'Reilly survey indicates that **5.8 million** have ONLY Internet connections while an additional **1 million** have Internet connections through, or in addition to, commercial service accounts. The Yahoo survey would seem to indicate that fully half access the net from home via a dialup connection to an Internet Service Provider. Netcom currently claims 232,000 subscribers. PSI claims some 40,000. UUNET won't say. InternetMCI sports some 11,000 accounts. All of what we think of as large direct Internet Service Providers combined doesn't account for half a million connections.

None of this adds up. At Boardwatch, we have sucked up every announced Internet Service Provider we can find to create a fairly startling database of **3240** entities that consider themselves Internet Service Providers. This isn't an estimate. We have mailing addresses and telephone numbers.

If half the 5.8 million subscribers (2.9 million) access through an ISP, and half a million of those are accounted for by the largest 20 ISPs, it would indicate that 2.4 million Internauts get their connection from the smaller fry. This would indicate about 740 subscribers each and matches precisely our perception of most of these ISPs serving about 750 customers. Interestingly, over 95% of them were operating bulletin boards 18 months ago. America seems to be getting on the Internet about as we said it would - through work and local BBS operators who offer the service. What we didn't count on was that the BBS operators would now consider themselves to be something else entirely - Internet Service Providers. Call it what you will. The Internet is a cottage industry. ♦

Jack Rickard

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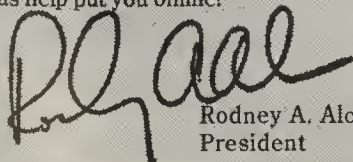
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WIN95 COMMUNICATIONS by Steve Jenkins

SHARING FOLDERS VIA THE INTERNET

Since its launch on August 24, 1995, magazines, trade journals, industry watchers, ISPs, computer users and even my technophobe wife have been talking about Microsoft Windows 95. The buzz on the Net throughout the Beta Test period and the Win95 Preview Program reached deafening levels; with Web pages, IRC channels, FTP sites, and listservers scrambling to offer up-to-date info on the newest crown prince of the Microsoft empire. As Webmaster of <http://www.windows95.com>, I've heard (and contributed) plenty of Win95 noise. Each month, this column will attempt to sort through the noise and bring you helpful information on using Windows 95 in the online environment.

This month, I'll give you step-by-step instructions for setting up Windows 95's built-in Client for Microsoft Networks to share and access shared resources over an Internet connection. Additionally, I'll talk about how ISPs can use this technology to provide additional revenue-generating services to their customers. So, grab your Windows 95 installation CD, and get ready to play nice and "share."

NAME RESOLUTION OVER THE NET

Most Internet users are familiar with the concept of the Domain Name Service (DNS). The DNS makes things much easier for a user to find a specific computer on the Net. Rather than having to remember an IP address like 204.114.169.6 when you want to connect to Boardwatch's Web server, you can simply enter www.boardwatch.com and get connected. Your computer still uses the numerical IP address to make the connection, but it uses the DNS to "check" a database to find out which IP address corresponds to the name www.boardwatch.com.

Windows 95's TCP/IP protocol requires a resolution method in order to translate network names into IP addresses before making a connection. It can use a DNS server to resolve Internet names like windows95.com or boardwatch.com, but to use the peer-to-peer capabilities of Windows 95 (which relies on Win95's built-in Microsoft Network Client), you need to enable another resolution method.

Win95's Microsoft Network Client (MNC) allows you to use computer names when making a connection to another computer running MNC software. Much like the DNS, when you try to connect to another system using a computer name, your computer needs a database in order to match the computer name with an IP address before it can make the connection. You can choose to create a local database, or use a remote one. A text file known as the LMHOSTS file can be used as a local database, and remote databases are managed through a service called WINS.

WINS V. LMHOSTS

WINS stands for "Windows Internet Naming Service" and runs as a service on a Windows NT 3.x server. When configured to use a WINS server, a Windows 95 client establishing a TCP/IP Internet connection registers its NetBIOS names (machine, workgroup, and user) and IP address with the WINS server, which stores the information in a database.

When a client tries to use a NetBIOS resource (like a network drive, program, printer, etc.) on another WINS-registered machine on the Internet, the client sends the remote machine's NetBIOS name (also known as the computer name) to the WINS server, which responds to the query with the remote machine's IP address. The client then uses the remote IP address to establish a connection. Because WINS works by "broadcasting" your NetBIOS name, you don't need to have a permanent IP address to connect to and share resources on the Internet! Microsoft provides a 25 page white paper about WINS that you can obtain by dialing the Microsoft PhoneFax Server at (800) 426-9400, document number 411.

If a WINS server is not available to a client, or if a computer name is requested that the WINS server can't resolve, Windows 95 looks for entries in your LMHOSTS file to find the IP address. This file resides in the client's \WINDOWS directory. It is loaded into memory when Windows 95 starts and lists IP addresses followed by the computer names of the machines you plan on accessing over the Net. When Windows 95 is installed, a sample LMHOSTS file called LMHOSTS.SAM is created in the \WINDOWS directory. You can edit the file with any ASCII text editor (such as Notepad), then save it as LMHOSTS, with no file extension.

WHICH TO CHOOSE?

Luckily, you don't really have to choose between WINS and LMHOSTS at all — you can use either, or both! An LMHOSTS file is best used when you know the IP addresses of the machines you wish to reach, and you know that those IP addresses will never change. If you plan on connecting to your office's mail server, for example, I'd put its name and IP address in my LMHOSTS file, since you could safely assume that your mail server's IP address won't be changing any time soon.

If you're a dial-up Internet user, however, and you'd like to connect to a friend's dial-up machine, chances are that your IP addresses are assigned dynamically each time you connect to your service provider. Rather than figuring out the remote IP address, updating your LMHOSTS file, then reloading it into memory, you and your friend could both configure your systems to register with the same WINS server.

Born and raised in Australia, Steve Jenkins moved to Portland, Oregon with his family in 1978. He is currently owner and Webmaster of [Windows95.com](http://www.windows95.com) at <http://www.windows95.com> which he administers from his two-bedroom apartment in Provo, Utah. Steve has a BA in French Literature, and is currently completing a Masters degree in Business Administration from the Marriott School of Management at Brigham Young University. He lives with his wife, Kay-Dawn, and his 15 year-old turtle, Sherman. Steve works as a consultant on Internet strategy to a number of firms, is an avid Netsurfer, and is one of the founder channel operators of IRC #Win95-net. When not sitting in front of his computer being yelled at by his wife to "shut that darned machine off," he enjoys skiing, piano, karate, teaching, writing, and wishing his wife would let him back on the computer. Steve's love of computers started in the early 80s, when he saved up enough money to buy a Commodore 64. He still argues that the C64 is one of the most powerful and user-friendly systems to date.

That way, no matter how often your IP addresses change, you can use the same computer name to make the connection, and the WINS server takes care of keeping track of the numbers.

WHAT WILL PEER-TO-PEER DO FOR ME?

A better question is: "What WON'T it do?" Nearly anything that can be accomplished over a Microsoft LAN connection can be done over the Internet with Windows 95 peer-to-peer networking. You can run network messaging applications like WinPopup and WinChat, you can play NetBIOS games like Hearts and Backgammon, you can even print to a remote printer or map a network drive to make a directory structure on the other side of the planet act like a hard drive sitting on your desk. I often play a round of cards with friends in Massachusetts, Geneva and Sweden, — all from a two-bedroom apartment in Provo, Utah. I also find it useful to provide a shared directory on my system that others can access freely across the Net. Rather than attach a file to an e-mail, I can simply place it in my shared folder and allow others to download it at will. It's almost like running your own BBS with a drag-and-drop interface!

GETTING SET UP

Now that you're convinced that peer-to-peer networking is for you, you're ready to make the few changes to your systems settings necessary to make it work. Don't feel like you have to install everything at once. If you just want to try out WINS, go ahead and set it up. You can add an LMHOSTS file or change your settings at any time.

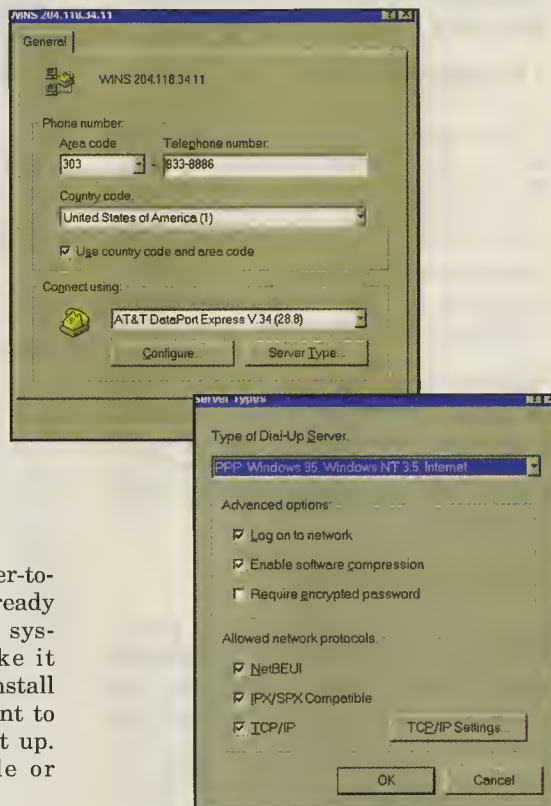
CONFIGURING WINS

How you configure your WINS client depends on how you access the Net. For simplicity's sake, I'll assume that you've already got a working Internet connection in Windows 95 (if you haven't, check out <http://www.windows95.com> for easy to follow instructions). When you installed the TCP/IP protocol in Windows 95, the WINS client software was installed automatically. To complete its configuration, you'll need the IP address of a WINS server. If your provider doesn't have WINS service, you can use IP addresses **204.118.34.11** and **204.118.34.6**. These servers are offered as free public

WINS servers by Tim Hall of Winserve. You can find out more about Tim's generous services at <http://www.winservice.com>. To configure your WINS client, it's simply a matter of changing a few settings!

SETTING UP WINS FOR A DIAL-UP CONNECTION

If you access the Internet via Windows 95's Dial-Up Networking, you can choose a different WINS configuration for each dial-up profile. If you use a SLIP dial-up connection, however, you're out of luck. Windows 95 only allows network access to shared resources over a PPP connection.



Dial-Up Networking WINS Dialogs

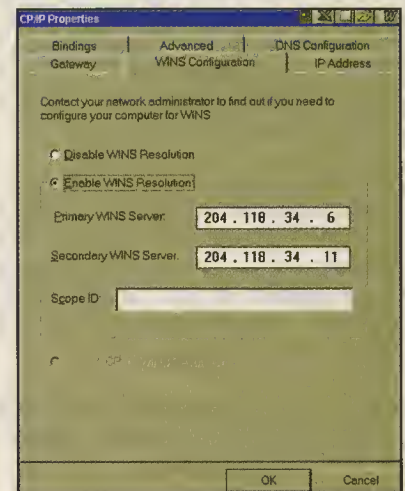
Open the **Dial-Up Networking** folder in **My Computer**. Select the desired dial-up profile, click the right mouse button, and choose **File Properties**. In the Properties dialog box, press the **Server Type** button. Make sure that the type of dial-up server is **PPP: Windows 95, Windows NT 3.5, Internet**. Also, verify that **Log on to network** is enabled.

Press the **TCP/IP Settings** button. You should have already entered the **DNS address** information for this connection when you set up this profile. If not, enter it now. In the **WINS** area, enter

the IP address of a Windows NT 3.x server that is running the WINS service. Press as many OK buttons as necessary to return you to the Dial-Up Networking Folder. Your dial-up profile is ready to use WINS!

SETTING UP WINS FOR A LAN CONNECTION

If you access the Internet through a gateway on a LAN, you'll need to configure WINS from the **Network** dialog box in the **Control Panel**. When you open the Network dialog box, you'll see a list of all network adapters, protocols, and services installed on your system. Select the **TCP/IP** protocol and press the **Properties** button.



LAN Networking Dialog

The TCP/IP Properties dialog contains six tabs. Most of them will already contain information about your TCP/IP connection. Select the **WINS Configuration** tab and select **Enable WINS Resolution**. Enter the IP address of your WINS server, or use one or both of the Winserve servers. You won't need to enter anything in the Scope ID box, and unless you're using a Windows 95 client dialing directly in to a Windows NT Server acting as an Internet gateway running DHCP, you shouldn't select the Use DHCP for WINS Resolution option, either. Press the OK button until you're back out on the Desktop. WINS is now enabled for your client.

CREATING AN LMHOSTS FILE

The format of the LMHOSTS file is simple. Just type in the IP address, a space, then the NetBIOS name of the remote computer. If you want the remote computer's information to be preloaded into your client's name cache, place the **#pre** keyword after the name.

This speeds up name resolution because the LMHOSTS file is used only when WINS broadcasts fail to resolve a name. By preloading, you save the time that the client would have spent broadcasting to the WINS server for name resolution. Here's a peek at what my LMHOSTS file looks like:

Sample LMHOSTS entries:

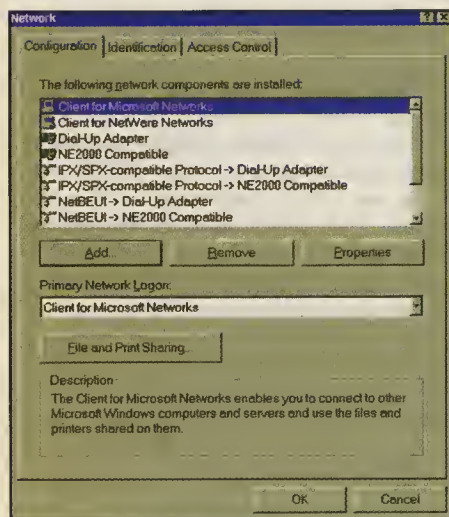
```
198.105.232.1 FTP #pre
204.118.34.6 WINSERVE95
204.118.34.11 WINSERVE.001
129.215.128.128 CLYDE
```

As stated before, it's best to include only the IP addresses of remote systems with static IP addresses. Otherwise, you'll constantly be changing and reloading your LMHOSTS file. Users with dynamic IPs should use WINS if they wish to share resources.

Once you've created or updated your LMHOSTS file, Windows 95 needs to reload it to register the changes. You can reboot, or go to a command prompt and type: **nbtstat -R**. The capital "R" is important — it will purge and reload your client's name cache.

Once you've configured your LMHOSTS file, all that's left is some minor configuration of the network client.

CONFIGURING THE CLIENT



Client Configuration Tabs

The final step of the configuration process is simple. Open the Network properties dialog in the Control Panel. There are three tabs in this dialog: Configuration, Identification, and Access Control. Configure them as follows:

• Configuration Tab

Verify that **Client for Microsoft Networks** is included in your installed network components list. If it isn't, press **Add**, then **Client**, then select **Client for Microsoft Networks**. Press **OK** and it will appear in the installed network components list. Verify that the **Primary Network Logon** is **Client for Microsoft Networks**.

Just underneath the Primary Network Logon list, you'll see the **File and Print Sharing** button. Pressing it will produce a dialog box that asks if you "want to be able to give others access to your files" and if you "want to be able to allow others to print to your printer(s)." Select one or both options, depending on your preference.

• Identification Tab

Fill in a name for your computer (this will be your client's NetBIOS name). You can call it anything, and it is not case-sensitive. I recommend using your username, so it will be easy for remote users to connect to you. Fill in anything for the **Workgroup** option (workgroups don't work across subnets, making it impossible to "browse" your Network Neighborhood for other computers on the Internet). You can also enter a description for your computer. Remote users will see this description when they connect to your client.

• Access Control Tab

If you chose to enable File and Printer Sharing earlier, enable the **Share-level** access control option on this tab. This allows you to set separate passwords and access levels for individual drives and directories. When you're done setting these options, press **OK**. You're ready to connect!

CONNECTING YOUR CLIENT TO THE INTERNET

Dial-up and login to your regular Internet connection as you normally would. If you're on a LAN, your Internet connection should already be active. Test your configuration by pressing the **Start** button, select **Run**, and enter the name of the remote resource you wish to access. You need to enter the remote resource following the Universal Naming Convention (UNC). In other words, enter two back-slashes (\\) then the remote computer name, followed by

another back-slash and the resource name. To access the DATA directory on Microsoft's FTP server, for example, enter **\\FTP\\DATA**.

If you don't know the exact name of the remote resource, but you do know the remote computer name, you can simply run the computer name for a list of all available shared resources. You cannot run your own computer name, however. You'll get an "extended error" message. Once your connection is working, try some of the following popular Internet shares:

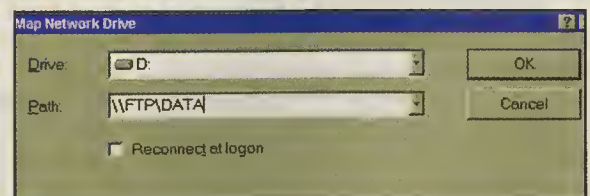
Publicly available WINS servers:

```
\\winservice.001\\guest
\\winservice95\\guest
\\clyde\\info server
```

For a current list of Internet shares, point your browser to <http://www.wam.umd.edu/~aaronw/work/systems.html>. This page, maintained by IRC #Win95-Net channel operator Aaron Weintraub (IRC nick: Discord), lists full-time and part-time shared resources offered by users around the world.

MAPPING REMOTE DRIVES

To make a remote resource appear local to your system, you can map it to a drive letter. Select **My Computer** on your desktop with a *single* click — don't actually open the icon. Then press the right mouse button to reveal a pull-down menu. Select **Map Network Drive**. You'll receive a dialog box that lets you choose which drive letter to assign and a text box for the UNC address of the remote resource. If you select the **Reconnect at logon** option, Windows 95 will attempt to re-establish a connection and assign the same drive letter to this resource the next time you logon.



Map Remote Drive Dialog

Press **OK** and the connection will be completed. The drive will now be accessible by any DOS or Windows application! To disconnect from the mapped drive, simply choose **Disconnect Network Drive** when you right-click on **My Computer**.

SHARING AND SECURITY ISSUES

Once you're able to access remote shares, try sharing some of your own stuff! You can share a CD-ROM drive, printer, directory, entire hard drive... just make sure that you protect your sensitive data and only allow full access to people you know and trust.

If you do plan on sharing any of your resources, make sure you password protect them according to the resource's importance and your security needs. To share a resource (such as a directory folder), select it, press the right mouse button, and select **Sharing** from the pulldown menu. The folder's properties dialog will be displayed, and the Sharing tab will be selected. Select **Shared As** and enter a name for this resource. You can also enter a comment for this share if you wish.

In the **Access Type** area, choose whether you want to provide **Full** or **Read Only** access to this share. You can also select **Depends on Password**, which will grant full access if a remote user knows one password, and read-only access if a different password is used. You can then enter the password(s) to allow access to this share. When you press OK, you'll be asked to verify any passwords you've set or changed.

When you create a share, if you place a dollar sign (\$) as the last character in

the shared resource name, you'll make it "hidden." For example, if you'd like to be able to gain full access to your hard drive remotely, but don't want it showing up as an available resource if others simply run your computer name, name the shared resource c\$. You can run \\your_computername\c\$, enter the correct password, and access your hard drive, but no one else will ever know it's there!

COMMERCIAL USES FOR SHARED RESOURCES

The ability to create shared resources suggests some exciting new revenue-generating opportunities for Internet Service Providers. In addition to his "for the good of the Net" free WINS service, Tim Hall of Winserve offers commercial WINS service, workgroup post offices, and shared directories. With a single Windows NT Server machine, ISPs can create private NTFS drives for commercial clients. Such a service would be especially useful for companies with remote sales reps, for example. Rather than allowing only office employees to access data on their server via LAN, an ISP could provide a shared directory for this company's data. Remote sales reps could simply initiate a dial-up connection to any Internet provider and access their company's data as if it were local. In addition, the share could be used to house a workgroup post

office, and remote sales reps could use Microsoft Mail or Microsoft Exchange instead of SMTP mail, and keep in sync with company meetings and events with Microsoft Schedule+.

I'm sure that with the inventive minds of most service providers, many other commercial uses for this type of technology will spring up all over the Net. If you've got an original idea for using WINS, e-mail me and I'll talk about it here.

STAYING PLUGGED IN

Hopefully, you're now able to connect to shared resources all over the world. If you're having trouble, you can join the #Win95-Net channel in IRC, or check out <http://www.windows95.com>. In addition to simply accessing and sharing files over the Net, you can use a variety of network applications with WINS and LMHOSTS. In fact, using the Windows 95 network client, I'm able to print to a laser printer in Iowa, play a weekly card game with users on different continents, and chat with friends in Denver and Australia — all for the price of a local phone call. Keep an eye on this column each month for instructions on doing all of the above and more, plus news, tips, and other info about using Windows 95 and the Internet. If you've got a comment, question, suggestion, or idea for an article, you can e-mail me at mailto:stevej@windows95.com. Happy surfing! ♦

SECURITY FLAW IN WIN95 SHARING DRIVERS

A potential security problem with file and printer sharing in Windows 95 was announced on Friday, October 20. Microsoft Corporation released a special issue of its *WinNews Electronic Newsletter*. In it, Microsoft recommended that Windows 95 customers using File and Printer Sharing (which is part of the client configuration step for using peer-to-peer networking) should upgrade to a new version of the necessary drivers. Both the File and Printer Sharing for NetWare Networks and File and Printer Sharing for Microsoft Networks are susceptible to security risk, and Microsoft recommends upgrading if either of both of these drivers are used on your system.

The peer-to-peer configuration discussed in this article uses only the File and Printer Sharing for Microsoft Networks driver, so that may be the only driver you need to update. If you're also connected to a NetWare network, I suggest getting both new drivers. You can download both drivers from Microsoft's <http://www.microsoft.com/windows/software/w95fpup.htm> Web site, The Microsoft Network online service, CompuServe, America Online, and Prodigy. Updated drivers will also be mailed to any user free of charge if they call Microsoft's FastTips line at (800) 936-4200, beginning Monday, October 23rd.



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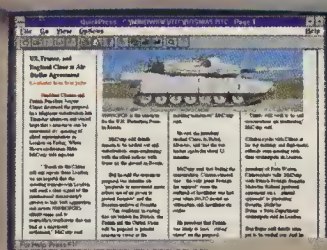


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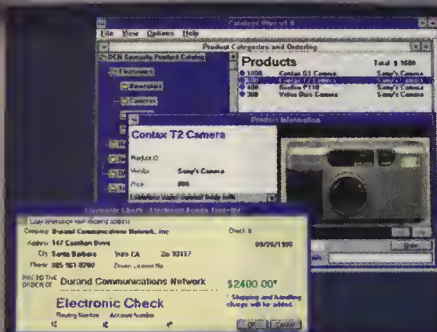
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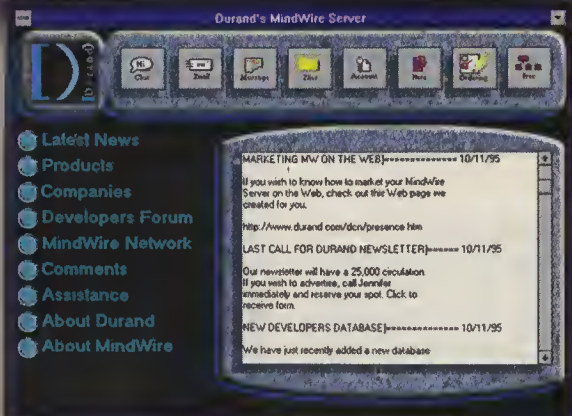
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SPEAKING JAVANESE by Jason Osgood

BRINGING BBS FEATURES TO THE INTERNET

Sure, the Internet is cool. But I miss all the things that are taken for granted in the BBS world. For instance, the difference between a BBS message folder and a newsgroup is like the difference between a dinner party among friends and a shouting match between strangers in a busy subway station.

Several BBS software companies are trying to bridge the dial-up and Internet worlds, making the BBS universally accessible. The underlying infrastructure of the Web, the hypertext markup language (HTML) and hypertext transfer protocol (HTTP), make creating a BBS user interface quite a challenge. One such effort, HotWired's discussion groups — <http://www.hotwired.com> — is difficult to use and navigate. Another solution is to forego HTTP and HTML altogether and use a proprietary browser that will support the features of the BBS.

The fundamental problem with the proprietary browser approach is that each BBS package will require unique and wonderful front-end software. There's simply no efficient way to sell, distribute, support, test, integrate and continuously upgrade all of these packages. Furthermore, those already surfing the Internet expect everything to be accessible with the Web browser they already have installed and working. So, in short, I believe that any BBS accessible via the Internet that requires special front-end software is doomed to fail.

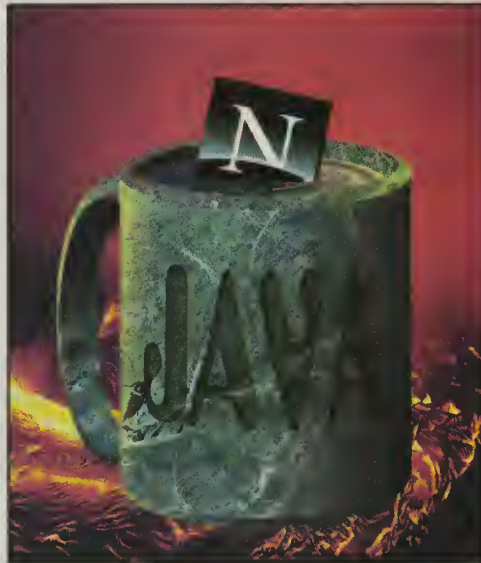
What's the alternative? Leverage what's already available. Obviously, HTML does not fit all of our needs. Fortunately, Sun recently introduced a new technology called Java that enables us to implement BBS-like features. Sun had the good sense to build on top of the existing Web infrastructure, so we lose nothing and gain everything.

This is the kickoff article documenting my efforts to bring BBS-like functionality to the Internet using Java. To start off, I present a small scenario demonstrating how and why Java is valuable. Next, I make an initial guess as to what my first Web BBS will

look like. Then, as with each month, I briefly mention the Java resources that I've found in my travels. Finally, I conclude this month by letting you know what to expect in the coming months.

THE CASE FOR JAVA

How does one describe Java? I'm not too swift with all this computer mumbo-jumbo, so I'll try to present how and why to use Java by way of example. (For those in desperate need of cold, hard, bare technical truth, I list a couple useful Java references in the next section.)



I've always wanted to publish geographic data on-line. The secret code word for this goofy idea of mine is "Instant Maps." While Instant Maps has all those traditional BBS features, like bulletins, discussion groups, and a searchable file library, the real draw is the ability to interactively access the map database. A visitor to Instant Maps may want to see a map showing all the parks or Thai restaurants in their neighborhood. Because we're on the Web, it only makes sense to have links between the shapes representing parks and restaurants with their respective home pages.

Sound cool? "Big deal," you say. "I can do all that with existing tools." You're right. In fact, it's already being done. But there are some crucial differences. Existing Web sites publishing maps, such as Xerox's PARC Map Viewer — <http://pubweb.parc.xerox.com/map> — can only send raster images. To zoom in to an area of interest, the visitor has to click on an image map to request a new, finer detailed image. All the computing happens on the server and the resulting (huge) image is then sent to the visitor. I can tell you, even with a T1 line, this is slow.

Having decided that raster images aren't so hot for map data, we need the ability to view vector data. This gives the user the ability to freely zoom and pan around the map, using the computing power of their own computer instead of the server. One option is to create a "helper application" that is called by the visitor's Web browser whenever it encounters some vec-

Jason Osgood was a sysop and BBS network administrator for 4 years. Like all Seattle natives, he enjoys grunge rock, rain and fine coffee. Jason's life-time goal is to make technology more useable and useful, particularly in the field of computer aided design software. He volunteers time to both a local conservationist group and a local school district's technology education initiative. Jason pays the rent doing contract programming and user interface design work. You can e-mail Jason at <mailto:josgood@seanet.com>

tor data. But a helper application isn't tightly integrated with the Web browser, so the user interface is nightmarish. Furthermore, you'd then have to fret over distributing your new vector map data viewer, instructing people how to install it and providing technical support. Thanks, but I'd rather beat myself silly with a frozen carp.

The other option, in a world without Java, is to extend the HTML specification to support vector map data. Pushing a new HTML extension through committee will incite religious quality warfare. Even then you have no assurance that you'll succeed. Once you have committee approval, you have to wait for all the Web browsers to support the new format, if they choose to support it at all.

Fortunately, there's a better way. In my dream, the map viewer and query tools on Instant Maps are special purpose Java "applets" that actually run on the visitor's computer. That allows speedy response times, full use of available resources and minimizes the amount of traffic on the network. The applet is downloaded as needed and runs on all Java enabled browsers, thanks to Java's platform neutral architecture.

This is an important point, so I'll say it again: Applets are downloaded as needed and run on the visitor's computer. That means when it comes time to add some new features to the query tool, the map viewer, or even radically changing the format of the map data, I can place the updated applet in my Web page and it'll be used from that point on. Good-bye standards committee, hello software distribution nirvana.

I used maps as an extreme example of why you'd want to use Java as the enabling technology for your Web BBS. Closer to Earth, I also have some goofy ideas on what a discussion group should look like. To begin with, I want a graphic tree style browser to help with navigating those convoluted message threads (I get lost easily). You may want to have a genealogical database server online. Or an interactive online multi-user game. Or a special purpose discussion group for structured debating, perhaps where the online variant of Robert's Rules of Order are enforced.

Whatever your idea, it's easier to implement it using Java, for the reasons listed above.

FROM DREAM TO REALITY

What makes a good BBS? Oh, that could start a couple of food fights. Knowing I'm inviting a cream pie to the face, here's my list of "stock" features that I'd like to have in my Web BBS, in no particular order.

- Visitors login with optional password validation
- Bulletins
- Questionnaires
- Discussion groups
- A visual browser to ease the navigation of message threads
- Support for off-line mail readers
- The ability to forward e-mail from a discussion group to a visitor's address
- Visual cues that will show which items have been updated since the last visit
- A fantastic files database
- The ability to batch upload and download files
- The ability to balance my checkbook, unattended

Of the above list, the two sections I'll bite off first will be the visitor login and a rudimentary discussion group. Sure, there's hundreds of "little" features that everyone wants, such as a virus scanner for file uploads. But I can add those types of things after I have a functioning system.

Whenever I start a programming project, I try to figure out what tools I need. My list is as follows. Sun's Java stuff is a must have. I've chosen Windows NT Advanced Server as the operating system, mainly because I've already got it running. The Web server I choose will likely be Netscape, Website or Alibaba. I have no idea which HTML authoring tools to use. The message and user databases need to be stored in a database server of some sort; my likely choice will be SQL Server. A dedicated line to an Internet provider is required, which I already have. A registered domain name is needed to be taken seriously, which I don't have yet.

Once I get done buying all these toys, I'll probably be several thousand dollars lighter. Just like in the dial-up BBS community, you can get started for a couple hundred dollars or spend a small fortune. Since this is a proof of concept effort, I've decided to use mainstream products for which I can readily find support. You may end up

deciding to use Linux, a freeware Web server, some public domain database tools and Perl. To each their own.

STEAMING TOWARDS JAVA

Although I had read the propaganda on Java, I didn't "get it" until after I actually played with HotJava, Sun's prototype Java based browser. Sun's Java home page — <http://java.sun.com> — has some demonstration applets and links to even more. While mostly cute, the demos do hint at the true potential of Java.

If you have the slightest interest in Java, I urge you to download HotJava and try it for yourself. The alpha releases are on the big side, about 3.5 Mb. You get all the documentation, developers tools, HotJava and sample applets. Cutting edge technology is more blade than handle. But if you can connect to the Internet, you probably have the technical acumen to get HotJava running.



You'll hoot when the dancing Duke on Sun's home page dances across the banner after you've sat idle for a few minutes. Using Java to

spice up a Web site really adds a whole new dimension to the surfing experience. The added emotional impact is significant and the sites are given a character that was otherwise lacking.

Aside from Sun's Java release itself, there's a few online references you should check out. First check out Ray Valdes' "Java Jive" home page — <http://www.dobbs.com/dddu/java.html>, which covers Java and related technological developments. Dr. Dobbs Magazine has made two Java articles available online. The first, "Java and Internet Programming" is an introduction to Java by Arthur van Hoff, one of the principal members of the Java team — <http://www.ddj.com/ddj/issues/j508a.htm>. The other is "Net Gets a Java Buzz" by Ray Valdes, which covers some of the practical aspects of Java — http://www.ddj.com/dddu/issues/u508_1ea.htm. Finally, Netscape has announced that their Navigator 2.0 browser, due December '95, will support Java — <http://home.netscape.com/newsref/pr/newsrelease43.html>.

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DIAL-UP BULLETIN BOARD

- ☐ Set data bits to 8, stop bits to 1, parity to None, emulation to ANSI and login as guest
- ☐ 300-2400 baud modems dial (304) 243-2561
- ☐ 9600 baud modems and higher dial (304) 243-2560

INTERNET CONNECTIONS

- ☐ Telnet iron.nttc.edu, login as guest
- ☐ Ftp iron.nttc.edu, login as anonymous
- ☐ Gopher iron.nttc.edu
- ☐ World Wide Web URL <http://www.nttc.edu>

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There are (at least) six Java related list servers. Sun’s mouthpiece, the **java-announce** list, has announcements for new releases and the like. The **java-interest** and **hotjava-interest** lists are for general Java and HotJava (Sun’s Java enabled Web browser) related discussion, respectively. If you don’t think you’re up for the 100+ messages per week, I recommend subscribing to the **java-interest-digest** and **hotjava-interest-digest** lists, which contain only the meaty messages (more signal, less noise). The **java-porting** list is for hard-core Java fanatics, who busy themselves with things like porting HotJava to the Amiga. For information on how to subscribe to any of these lists, visit <http://www.javasoft.com/mail.html>. To help promote Java, Sun sponsored a programming contest. Some 60 entries were received and the winners are announced at <http://www.javasoft.com/contest/results.html>. The grand prize went to an educational applet that graphically demonstrates the Pythagorean Theorem. Most of the entries were games, simulations and so forth. While pretty cool stuff, not much of it piqued my interest.

For a list of other Java applets to see, visit <http://www.javasoft.com/applets/appletSites.html>. My two favorite are Starwave’s crossword puzzle game — <http://www.starwave.com/people/haynes/crosswordEntry.html> — and Johan’s Magic Marker Hack — <http://www.rosebud.com/rb/art/jo/jo.html> — where you get to deface fine art.

CONCLUSION

Next month I’ll present a “product specification”, detailing the first cut of my Web BBS. The following months, I’ll share with you stories of my victories and defeats. Then in 3 or 4 months, I’ll probably scrap everything I have and start over, adding all the features that should have been there the first time.

Whatever code I develop, at least initially, will be made available on both Boardwatch’s and my own home page. This way if you want to get involved you can. My hope is that some other sysops will take an active interest and we together can beat this idea into a pulp.

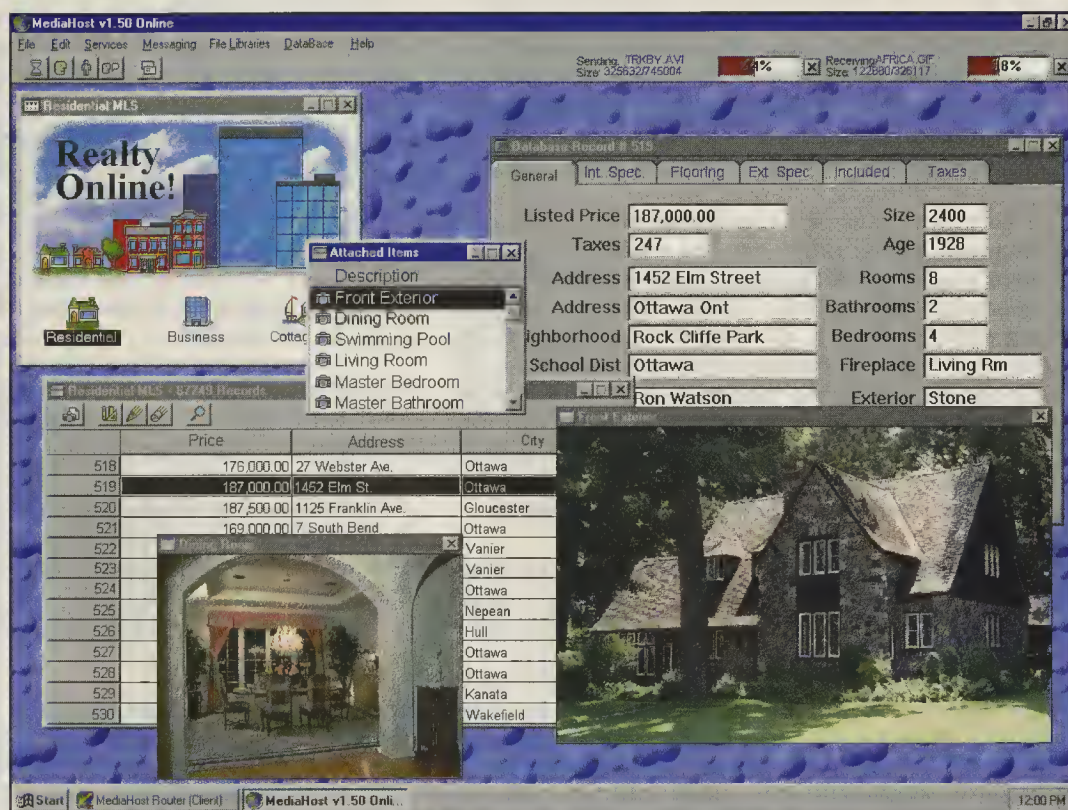
I’m eager for ideas, feedback, criticism, and volunteers. If you get the urge to write, I can be reached at <mailto:josgood@seanet.com>

Cheers, Jason Osgood ♦

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LAPTOP PHONE HOME

by Jack Rickard

CONNECTING THE LAPTOP TO THE DESKTOP VIA INTERNET WITH WINDOWS 95

The word from inside Microsoft indicates that they have somehow gotten religion with regards to the Internet. The NEXT version of Windows, currently referred to as Nashville, is nearly ready for beta distribution. And apparently the philosophy of developing operating systems has been strongly revised to view them as end points of a global network linking all computers. Last issue, we described connecting to any Internet Service Provider using the Point-to-Point Protocol (PPP), the use of the Microsoft Exchange program to send and receive electronic mail and the use of Internet Explorer to surf the web.

In this issue, Steve Jenkins details how to connect to Microsoft Windows NT servers across the Internet using the Microsoft Network Client and the Windows Internet Naming Service (WINS). This is a fascinating area as we are starting to see public WINS "servers" which essentially act as very easy to use file repositories after the fashion of FTP sites. Unlike FTP sites, this technique uses Microsoft's own networking services. Directories and files appear as folders and documents mapped to your own local machine. The potential here is almost frightening.

But the techniques used in Windows95 have more private — and probably more useful — utility as well. At **Boardwatch**, like many small companies, we have a number of computers at the office, connected on a Novell Local Area Network. This LAN is connected to the Internet via a T1 leased line to an Internet Service Provider. But many of us also have computers at home. And we carry laptops when traveling to conferences, expositions, etc. Inevitably, whatever we need at any one time is located on some computer OTHER than the one in front of us. We have tried shuttling portable hard disk drives back and forth, various software programs to "synchronize" files between computers, and have of course uploaded and downloaded thousands of files from the BBS. We've somewhat successfully used programs such as WS FTP and CuteFTP to at least be able to upload and download files by modem to various directories on our LAN. But none of these proved optimal. We would LIKE to be able to actually "access" drives at the office from home, or from the road, and be able to use them just like a local disk drive.

We were surprised to learn that with Windows95 you can access ANY disk drive on ANY computer on your office LAN, from anywhere on the Internet — essentially anywhere in the world. And it appears on your laptop as if it were a kind of slow local disk drive. And you really don't need WINS to do it.

The heart of this revolves around the inherent peer-to-peer networking capabilities of the Windows95 and Windows NT operating systems. They very easily share disk drives and printers between them. And they have the surprising ability to do so across the Internet by "tunneling" via the TCP/IP protocol. A single file called LMHOSTS in your WIN95 directory can allow you access any computer on the Internet that is setup to "share" its drives and directories with you.

LMHOSTS stands for LAN Manager Hosts. LAN Manager was originally Microsoft's proprietary LAN software. Today, they have incorporated the LAN concept into the operating system itself. It's a little slow, but it is peer-to-peer. That is, any machine can "share" any drive or printer with anyone else on the network. There is no inherent need for a "file server" to act as intermediary.

The Microsoft network identifies entities on the network by "name." A machine can be called JACK or FLOWERS or anything else and is uniquely identified by this NetBIOS name. LMHOSTS performs a very interesting function. It associates Internet Protocol numeric addresses with NetBIOS names. This basically forms a link or association between the TCP/IP protocol, which uses IP addresses, and Microsoft's NetBEUI protocol, which uses these machine names.

With an LMHOSTS file, you can identify specific machines by IP numeric, without contacting any WINS server at all. More importantly, once the operating system can associate an IP name with a NetBIOS name, it can network with it just as if it were any other Windows machine. And as they say on the Internet, "packets is packets." That they have to travel halfway around the world to reach their destination is of little interest to the software. The Microsoft network packets are simply encapsulated within TCP/IP packets, and routed to their destination.

We can use this to specific advantage by "sharing" resources between our laptop or home computer, and the office network computers. In effect, we can map hard disk drives at the office so that they appear to be local drives for our laptop. Slow local drives, but fully functional.

THE BASIC SCENARIO

This article describes a connection between an office desktop computer and a portable laptop computer. The office machine is connected to a Novell network

that is linked to the Internet via TCP/IP over a 1.544 Mbps T1 leased line. The laptop computer is using a 28.8 kbps modem to dial up access to a PPP account. This account can be with any Internet Service Provider anywhere, and the dial-up port can be located anywhere. The objective is to make the **C:** and **D:** drives of the desktop machine appear to be drives **E:** and **F:** on the laptop. This allows us to automatically connect to an Internet dial-up port with our laptop, and have full read/write access to our desktop disk drives.

THE OFFICE DESKTOP MACHINE

As mentioned, we can access any machine on our LAN that runs Windows95 or Windows NT — either server or workstation versions. I am most interested in accessing MY desktop machine for fairly transparent reasons. To do so, I need to know the IP number of my machine (**204.144.169.22**) and it's NetBIOS name — in this case the machine is simply titled **JACK**. I also need to setup my desktop machine to "share" its drives.

This machine is a Gateway P5-90 running Windows 95. We can assume it is already set up to access the local Novell network and to use TCP/IP to access the Internet. It has two drives, **C:** and **D:** and we want to make them both available.

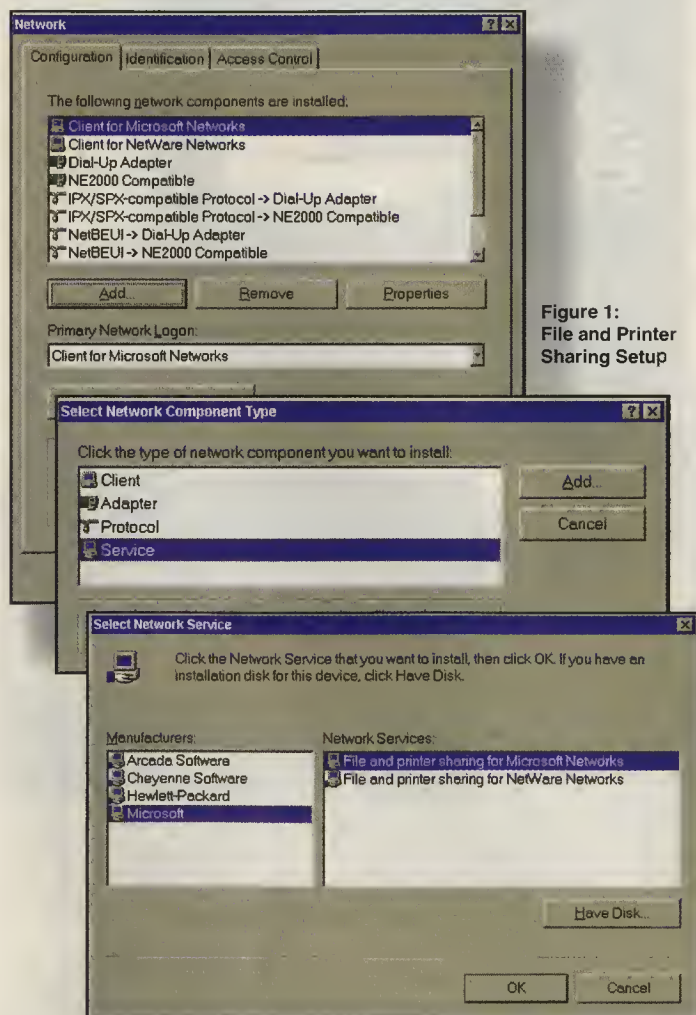


Figure 1:
File and Printer
Sharing Setup

and then select **SERVICE** from the list of options. This brings up a list of services and we want to select **MICROSOFT**. This brings up two file sharing services, **FILE AND PRINTER SHARING FOR MICROSOFT NETWORKS** and **FILE AND PRINTER SHARING FOR NETWARE NETWORKS**. We want to select the one for **Microsoft Networks**. (See Figure 1)

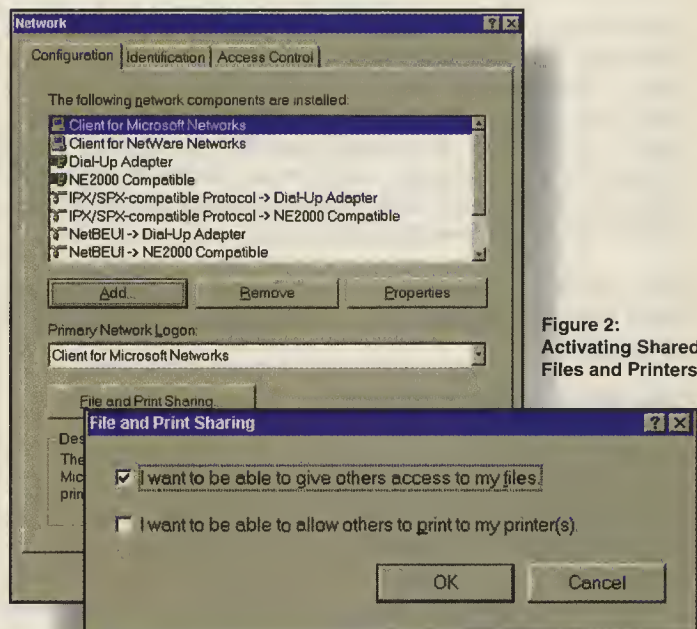


Figure 2:
Activating Shared
Files and Printers

Click **OK** to add this and return to the **CONFIGURATION** panel. This panel features a **FILE AND PRINTER SHARING** button at the bottom. Click this and check the option **I WANT TO BE ABLE TO GIVE OTHERS ACCESS TO MY FILES**. (See Figure 2)

SECURITY PROVISIONS

Now click on the **ACCESS CONTROL** tab at the top of the configuration panel. This tab presents two options: **SHARE-LEVEL ACCESS CONTROL** and **USER-LEVEL ACCESS CONTROL**. (See Figure 3)

This brings up a rather important consideration — security. Our whole objective is to access our disk drives from anywhere on the Internet. Inherent in doing so is the prospect that **ANYONE** can access our disk drives from anywhere on the Internet. **SHARE-LEVEL ACCESS CONTROL** allows us to assign a password to each device on our system when we share it. In theory only those who know the password can access those devices.

The other option is **USER-LEVEL ACCESS CONTROL**. This allows us to list all users who have access to it. This **LOOKS** more secure. I rather find it suspicious. It is far too easy to

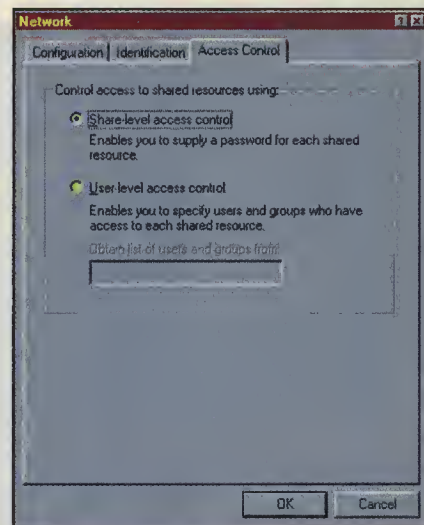


Figure 3:
Access Control

The first step is to install Microsoft's **File and Printer Sharing** service. To do this, open **MY COMPUTER**, the **CONTROL PANEL**, and the **NETWORKING** icon. This brings up the familiar network configuration panel. We want to click **ADD**

"appear" to be someone you are not on a TCP/IP Internet (spoofing). So I prefer the SHARE-LEVEL ACCESS CONTROL albeit thinly. Even then, understand that according to Rickard's Security Paradox, we achieve the maximum security when we assume we don't have any, and almost anything we do to enhance security tends to degrade it in practice.

We'll take the normal "lock your car" precaution of password protecting this computer, and then assume everyone in creation is browsing any files we keep on it. Maybe we'll get lucky and the disarray and confused clutter of our files combined with our lack of a life and inability to separate useful information from info-noise will bore any intruders into sufficient tearful sympathy that they'll just leave us some appropriately taunting message and move on.

That wraps up networking. Close the configuration screen. You'll have to **RESTART THE COMPUTER** for the changes to take effect.

SPECIFYING SHARED DRIVES

We've successfully installed file and printer sharing for Microsoft Networks and configured it to allow us to share disk drives. We've also configured it to require a password to access a drive. The remaining step is to actually share the drives. Under **MY COMPUTER**, highlight the local **C:** drive and click on the RIGHT mouse button. This brings up a panel with the **SHARING** option. If we click this it brings up our **SHARING** properties panel for the **C:** drive. The default is **NOT SHARED**. If we click on **SHARED AS:** several options on this panel become live.

First, fill in the **SHARED AS:** box. This can be any text to label the resource. It will appear on our laptop when we connect to the **JACK** machine. We'll just put **C** in this box to indicate the drive.

Under **ACCESS TYPE** we have **READ ACCESS, FULL, and DEPENDS ON PASSWORD.** We can share this drive so that it can be read but not written to. With **FULL** selected, we can read and write to the disk. We could even set it up so some people can get **READ** only access with one password and full access with a second. Perhaps I

would like to make read access available to some other Boardwatch employee, and give them a different password, while enjoying full read/write access via my own personal password. But in this case, we'll just select **FULL**. Finally, enter a password for full access. On closing this screen, you'll be prompted to enter the password a second time for confirmation. Obviously longer pass-

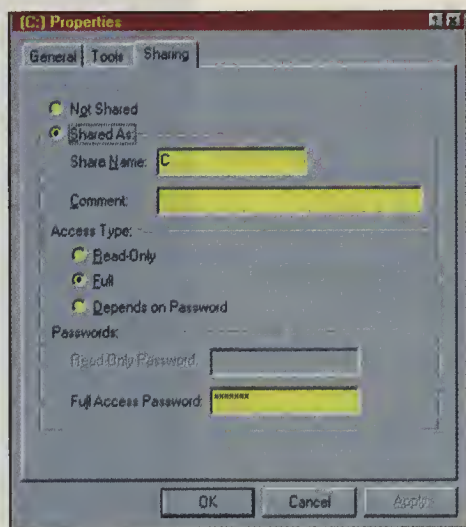


Figure 4:
Specifying Shared Drives

words that include non-alpha-numeric characters are more secure.

We'll then perform the same process on the **D:** drive to share it — describing it as **D**. And we're done making our drives available to everyone on the planet.

THE LAPTOP MACHINE

To get the laptop machine connected to our desktop over the Internet, we need to adjust a few items.

1. Have the client for Microsoft Networks and NetBEUI protocol installed in our networking area.
2. Modify our dial-up connection to add the NetBEUI protocol.
3. Correlate the IP number of the desktop machine with a NetBIOS name so we can find it over the Internet. This is done in the LMHOSTS file.
4. Log on to the network and "map" the remote drives to our laptop machine.

ADD NETBEUI TO NETWORKING

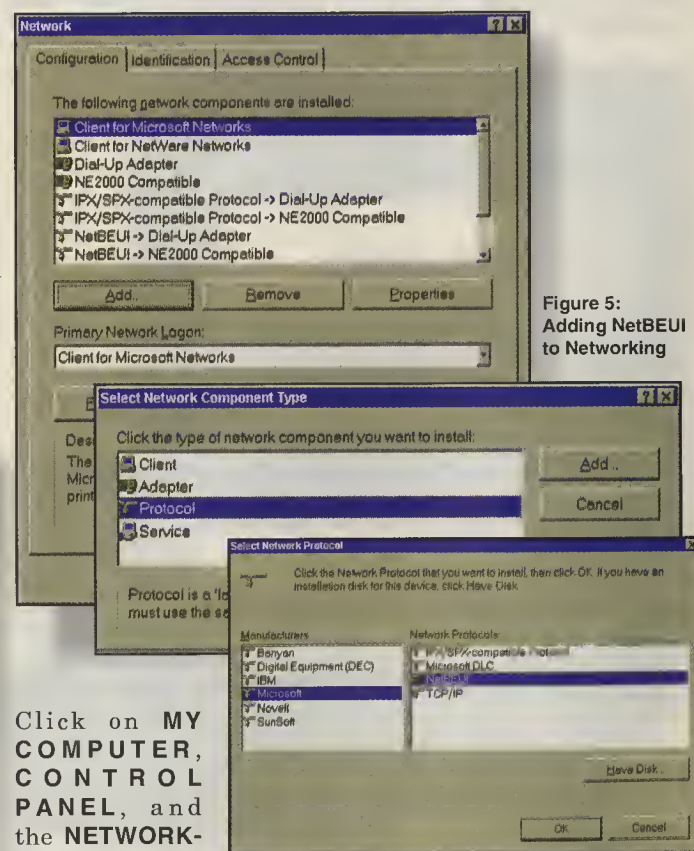


Figure 5:
Adding NetBEUI
to Networking

Click on **MY COMPUTER, CONTROL PANEL,** and the **NETWORKING** icon. This

brings up our networking configuration screen. If you have a working system that can log on to a PPP account, you probably have TCP/IP protocol and Microsoft Client for Networks already installed, as well as a dial-up adapter.

At this point, we want to click **ADD, PROTOCOL, MICROSOFT,** and select **NETBEUI** as the protocol to add. We can take the default properties on this protocol so nothing needs to be changed. Just add it. This addition will probably require your Windows95 CD-ROM or diskettes, and you will have to restart your computer for the changes to take effect. Make sure the default client is **Client for Microsoft Networks**.

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ADD NETBEUI TO DIAL-UP NETWORKING

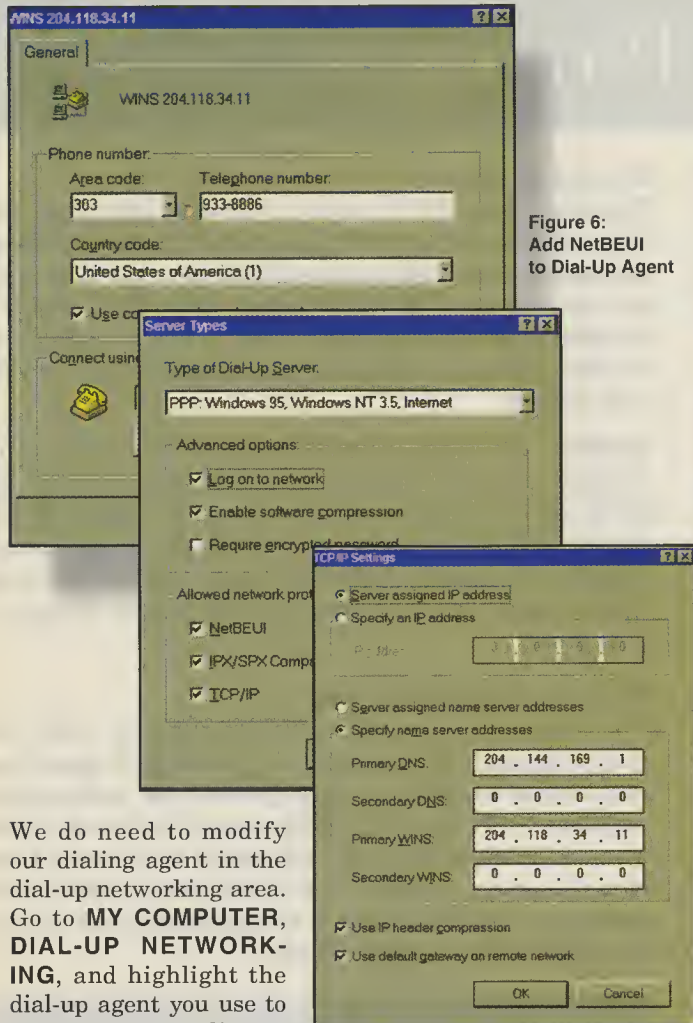


Figure 6:
Add NetBEUI
to Dial-Up Agent

We do need to modify our dialing agent in the dial-up networking area. Go to **MY COMPUTER, DIAL-UP NETWORKING**, and highlight the dial-up agent you use to connect to your dial-up PPP account. Then click on **FILE** and **PROPERTIES** to bring up the configuration. (See Figure 6)

Click on **SERVER TYPE**. Make sure you are using **PPP: WINDOWS95, WINDOWS NT 3.5, INTERNET** as the server type. Under **ADVANCED OPTIONS**, check the **LOG ON TO NETWORK** box. This refers to logging on to our Microsoft Network rather than logging on to your PPP account. This will cause our laptop to attempt to find the systems listed in our LMHOSTS file when we connect.

Under **ALLOWED NETWORK PROTOCOLS**, you should already have **TCP/IP** checked since we assume you already have a PPP connection to your Internet Service Provider working. Also check **NetBEUI**. OK your way back out.

CREATE LMHOSTS FILE

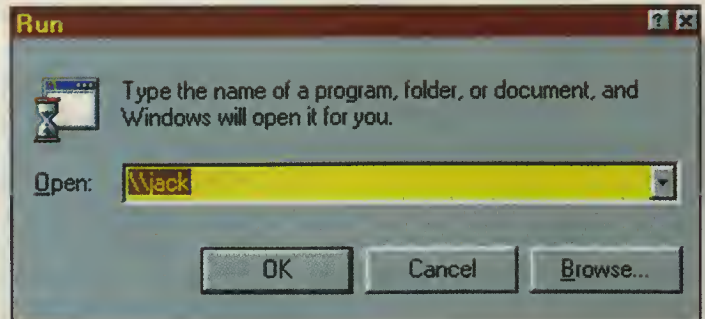
The **LMHOSTS** file resides in the Windows directory and simply lists **LAN Manager Hosts**. Its format is extraordinarily simple. It is a text file where each line describes a host with its **IP number**, followed by a space or tab, and a **NetBIOS** host name. Our entire LMHOSTS file consists of a single line:

204.144.169.22 jack

The file must NOT have a filename extension but simply be named **LMHOSTS**. There is an **LMHOSTS.SAM** sample file in the directory already that describes a little bit more about format and use.

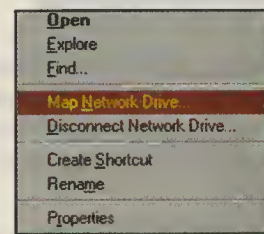
Basically, we are telling our Microsoft client how to find machine **JACK** across the Internet. It doesn't have to "lookup" anything using WINS or DNS or any external service at all. If it can find **204.144.169.22** across the Internet, it has found **JACK**. That's ALL there is to it. We are simply correlating an Internet Protocol number with a NetBIOS machine name.

After creating our LMHOSTS file in the windows directory, we can reboot the machine to load it. Alternatively, we can call up an MS-DOS window and enter **NBTSTAT -R** to reload the LMHOSTS file to make it active.



LOGON AND MAP DRIVES

Now click on your dial-up connection and perform your normal logon to your PPP account. Once connected, we want to see if we can find our JACK computer. Click on **START** on the Windows95 task bar and **RUN**. Enter **\\JACK** as the UNC resource. Within a few seconds, a box should pop up as **JACK** with two folders in it, **C** and **D**. This indicates that we have successfully tunneled through the Internet to **204.144.169.22** and have made a connection to it and that we label it **JACK**. You can click on these folders and open them to view the contents of these drives.



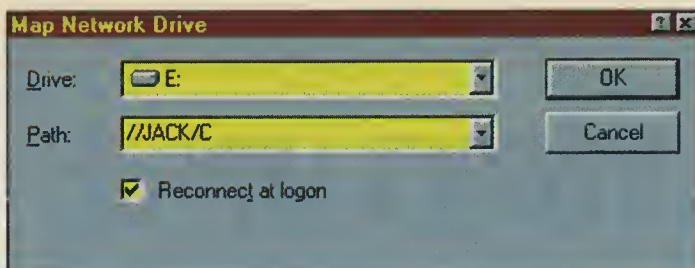
This would be well and good enough, but we want to actually use the drives as local drives. In this way, we could open a Microsoft Word file for example, revise it, and save it as if it were on our laptop machine. To do this, we need to **MAP** the drive.

Highlight the **MY COMPUTER** icon on the desktop but don't open it. Rather, click on the right mouse button. One of the options is **MAP NETWORK DRIVE**. Click on this to call up the **MAP NETWORK DRIVE** screen. This screen has three options, **DRIVE:**, **PATH:** and **RECONNECT AT LOGON**.

The **DRIVE:** option has a picklist where we can pick any unused drive. We will map to the **E:** drive first.

Under path, we will enter **\\JACK\C**. This is the Uniform Naming Convention or UNC used by Microsoft. A UNC typically consists of a machine name, preceded by two backslashes, and a resource, such as a drive or printer. **\\JACK** corresponds to the **JACK** machine (**204.144.169.22**) and the **\C** corresponds to the **C:** drive we shared and labeled as **C**.

Finally, let's DO check the **RECONNECT AT LOGON** box. This will cause us to attempt to remap this drive automatically each time we log on to our PPP account.



We can repeat this process to map our local F: drive to \\JACKID.

The first time we access these drives, we will be asked for a password. You can elect to not only enter the password, but to save it as well. If you do, it will be saved within Windows95 and you will NOT have to enter the password manually on future logons. One consideration is that if you lose your laptop, for example, the finder will not need a password either. They can simply make the connection and access your desktop machine by virtue of physically having possession of the laptop. If you elect not to save the password, you will of course have to enter it each time, but losing the laptop does not mean your desktop machine is open to the new laptop owner until you can change the password.

At this point, any time we connect to our PPP account, we should automatically have two new drives, E: and F:, appear on our laptop. And they will actually be the C: and D: drives on our desktop machine.

We can save files to these drives, access files already there, and indeed run programs on our laptop that reside only on our desktop machine. And we can do so from wherever we might be, or from any PPP account or port in any city.

SUMMARY

In practice, we can add other machines to our LMHOSTS file and other drive mappings at will. We have a Windows NT server that can "share" all volumes on our Novell file server — effectively acting as a gateway between Microsoft networking and Novell. Another NT server acts as our web server for <http://www.boardwatch.com>, and so forth. In this way, we can actually access all our Novell volumes, our web server, etc. in addition to my own desktop machine, all from a laptop. We can do maintenance on

the BBS, the Web server, or anything else in the office, from anywhere in the world where we can obtain some sort of TCP/IP connection.

The NT servers require a bit more elaborate setup. They have functions to set up groups and classes of users, associate machine names and passwords, and other functions useful for network administrators.

The drives, operating over a 28.8 kbps modem link and then over the Internet, are slow of course. And the process of logging on to each Windows machine and mapping the drives seriously slows the logon process. Our normal PPP log on takes about 40 seconds, and with all this drive mapping, it runs more on the order of three minutes and 40 seconds. And we found that you can "lose" your connection to a machine, even though your PPP connection is still working fine. We often have to re-open JACK. But you usually don't have to remap the drives. Simply go open one and it will relist the contents. So it is a little slow and clunky. But the first time we actually made this connection, we detonated. It was another one of those "connectivity rushes" that make online communications a fun game. ♦



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CONSUMMATE WINSOCK APPS by Forrest Stroud

VIRTUAL TCP LITE

The applications reviewed here and many more are available on Stroud's Consummate Winsock Apps List, <http://cwsapps.texas.net> and <http://cws.wilmington.net>.

Forrest H. Stroud is a senior at The University of Texas at Austin. He is currently pursuing a degree and career in Information Systems and Data Communications Management. Stroud can be reached at mailto:Neuroses@mail.utexas.edu.

With new versions of Winsock apps arriving on the Net every other minute, it quickly becomes difficult and time-consuming to keep up. Yesterday, it was the new release of Internet Explorer that kept you glued to your computer for several hours. Today it will be the final release of NCSA Mosaic 2.0, and tomorrow it will likely be the latest and greatest version of Netscape, or Pegasus Mail, or Emissary or... the Internet CoffeeMaker?

The Internet is constantly evolving, and in order to stay abreast of what's going on, you're going to need to take a few necessary steps.

First, you'll have to give up watching TV — now that OJ is history, is there really anything else worth watching?

Second, it is important to keep your priorities in order; with this in mind, you are going to have to start limiting the amount of time you can devote to school or work.

Third, all your leisure time will definitely need to be sacrificed in return for more quality time with your significant other — the computer will surely appreciate it.

Fourth, it is absolutely essential that you learn the finer points of living on four hours or less of sleep each night.

Finally, any social life or love life (or life of any kind for that matter) that you used to have will need to be quickly forgotten...there are much more important things waiting to be done on the Net.

What it all comes down to is that eight hours a day with your computer just isn't enough any more, especially since the advent of the Internet. There are always new cybermalls to scope out, web sites to monitor, IRC channels to infiltrate, and Net apps to download, not to mention the wealth of information available to satisfy your more prurient interests.

By following my 5-step approach as outlined above, you will be well on your way to ensuring that nothing on the Net escapes your attention. It may cost you a few friends, your beloved, your job, your physical and mental health, and who knows what else. But in the end you'll be more in harmony with your computer and the vast virtual world that lies beyond. And after all, isn't that what's most important?

Do yourself and your living, breathing, real significant other a favor — take a break! Go see a movie, have a nice picnic, go camping, take a road tour of Texas, or do anything you want, just so long as you promise to leave your computer at home. I guarantee that you and yours will be better off for doing so. But before you go, you might just want to take a few minutes to check out what's new this month on the Net apps front...

VIRTUAL TCP LITE



Desc:	A must-have client for Windows 3.x non-SLIP/PPP users
Pros:	Easy access to the Net, a must have for non-SLIP/PPP users, integrated toolbar
Cons:	Lacks compatibility with WinTalk, Ping, and all 32-bit clients
Location:	ftp://ftp.infoexpress.com/pub/vtcp/
Filename:	v???.zip
Status:	Shareware - \$34.95. Free 2 week evaluation.
Company:	Info Express

For many Windows 3.x users without SLIP/PPP access, getting onto the Internet can be a difficult process. Thankfully, several apps have been released to simplify the task for users with access to a host computer already on the Net. SLIP/PPP emulators like TIA and SLiRP are one method of getting up and running on the Internet, but these clients sometimes sacrifice compatibility with winsock apps. Another type of app for this task is a TCP/IP proxy, which redirects the network operations to the proxy running on the UNIX host. The disadvantage to this type of redirector software is that it must be run on the remote computer. Thankfully, most users will be able to make use of either type without too many hassles. For the latter method, Virtual TCP Lite is one of the easiest TCP/IP proxy clients to use, and is, at the same time, one of the strongest in terms of features and compatibility with other apps.

Prospective users will first need to download the client software for their local computer and also download the redirector software (<http://www.infoexpress.com/vtcpsw.html>) for the host computer. Virtual TCP Lite has software available for host computers running almost any flavor of UNIX (including Linux). Once you get up and run-

ning with the software, connecting to the Net is a relatively complicated process that is greatly simplified by Virtual TCP Lite's preconfigured scripts and login options. There is also a user-configurable toolbar for quick access to your favorite winsock apps. Speaking of winsock apps, Virtual TCP Lite supports nearly all 16-bit clients, with the exception of WinTalk and Ping. A version for Windows 95 (which will support 32-bit clients) is expected to be released later this fall. Overall, Virtual TCP is a must-have app for prospective Internet users who lack access to SLIP/PPP.

WEBFX FOR NETSCAPE



Desc: A new VRML browser that integrates with Netscape Navigator

Pros: Near flawless integration with your favorite web browser, excellent VRML capabilities

Cons: Still somewhat buggy, currently lacks a few critical features

Location: <ftp://ftp.paperinc.com/pub/webfx/windows/netscape/webfxn??exe>

The Virtual Reality Modeling Language (VRML) browser battle shows no sign of slowing down as many companies strive to ensure that their browser becomes the definitive client for this increasingly popular technology. Paper Software's WebFX is the newest browser to enter the fray and with it come several interesting new features. Unfortunately, the coolest features are not expected to be released until the next beta version. For now, though, WebFX does the impressive job of seamlessly integrating VRML into your HTML web browser. WebFX works its magic by embedding itself into the web browser so that it can launch VRML worlds internally and also so that it can take advantage of the web browser's superior features, including built in security, bookmark management, multitasking, and OLE automation capabilities. Since each web browser is different, you will need to download the specific version of WebFX that will work with your favorite browser. Currently, versions for Netscape (only the 16-bit version) and QMosaic are available; releases for additional browsers should be available soon.

Even though it is only in "bleeding edge" beta release, WebFX is quite attractive. Navigation through worlds is simple and can be done through either the mouse or the keyboard. Fly-by and walk-through modes are both currently supported; future versions will also allow you to modify worlds as you move through them. Additional features include full VRML 1.0 support, wireframe rendering, gzip support, physics-based navigation with optional collision detection, HTML hotspots (network support), and more. The wishlist of features is extensive as well — sound and animation, multitasking support for viewing multiple worlds at once, 3-D IRC chatting with VRML avatars, and in-place authoring of worlds. One additional feature that I'd like to see added is WebSpace's navigational "Viewpoints," which allow you to quickly jump to various parts of a VRML world (think of them as the VRML equivalent of a bookmark).

Aside from this minor omission and a few bugs here and there, I have very few complaints against WebFX. Overall, WebFX has accomplished the unprecedented — seamless integration of the HTML and VRML worlds — and as a result, I see a bright future ahead for both Paper Software and WebFX.

MAP THIS!



Desc: An excellent WWW Image Map editor — and it's free!

Pros: Efficient and intuitive image map editing, easiest way to create image maps for the web

Cons: Lacks some notable features, the help documentation could be vastly improved

Location: <ftp://ftp.coast.net/SimTel/win3/internet/mpths???zip>

Filename: mpths???zip

Status: Freeware

This is the first 32-bit image map editor I've seen to date, and it's definitely one of the better editors overall. If you're considering creating your own image maps for your web site, you'll need to first make sure that you meet four requirements:

You'll need your own web page(s) — obviously.

The server that hosts the page(s) must be able to support image maps (talk to your system admin about this).

You'll need to know how to create and add image maps to your web page.

You'll need to know how to use the image map function of your server.

Assuming that you meet the first requirement but are possibly in need of more information for the other three, I've scoured the web for helpful sites on this subject. First, you'll need to consult with your system administrator on whether your map files should be saved in the CERN or NCSA format and where they should be stored on the server. If you're going to be working with CERN maps, check out the CERN tutorial at <http://www.w3.org/hypertext/WWW/Daemon/User/CGI/HTImageDoc.html> for creating image maps; if you'll be working with NCSA maps, check out their tutorial at <http://hoohoo.ncsa.uiuc.edu/docs/tutorials/imagemapping.html> instead.

Finally, the addition of client-side image maps in browsers like Internet Explorer and Netscape (2.0) should make creating and storing image maps a much easier process.

Now that you have the necessary knowledge for creating image maps, you can put the multitude of features in Map This! to good use. Map This! offers users an intuitive, graphics-based interface for creating and modifying image maps. It includes grid lines; zoom in/out; rectangle, polygon, and

circle tools; right mouse button functionality; and a map area editor for quick and efficient map editing. While creating the image map is often the easiest step in setting up an image map, Map This! makes the process even easier by providing all the tools you'll need for this critical step. Map This! does have a few negative aspects, though; the help documentation is virtually non-existent (which is one of the reasons why I've attempted to provide some web sites with more comprehensive information on the subject); copy, cut, and paste commands are absent in this release; and there is no built-in testing/previewing of the image map. Notwithstanding these minor complaints, Map This is a must-have app for anyone considering the idea of using an image map on a web site.



NCOMPASS FOR WINDOWS 95

Desc:	The first object-oriented browser for the World Wide Web
Pros:	OLE Custom Controls can be embedded and executed from web pages
Cons:	Lacks many web features, including ftp, news, and mailto support
Location:	http://www.excite.sfu.ca/NCompass/
Filename:	ncompass.exe
Status:	Freeware
Company:	The ExCITE Center

The results of NCompass are similar to HotJava, but the path taken to get there is far different — instead of using the Java language to create distributable applets, NCompass uses Object Linking and Embedding (OLE) technology to create OLE custom controls (OCXs) that can be embedded and executed from within an HTML page. Again, like Java, the possibilities for this are nearly limitless. Current features include inline AVI movies, 3-D animations, sound effects, and much more — who can tell what the future will bring for both of these apps. Unfortunately, the technology in NCompass is currently limited to Windows 95 and NT users. A Windows 3.x version should be available soon, but cross-platform compatibility with Macs and UNIX machines isn't planned for the near future.

As a web browser, NCompass delivers many features and reasonable speed, though it still lags behind the best browsers in both of these areas. It does deliver basic tables (including width, height, rowspan, and colspan attributes), transparent GIFs, inline JPEG images, document and OLE caching, and centering, among other features. However, this new program also lacks many features, including FTP, forms, and mailto support; an integrated newsreader; advanced graphics rendering; configurability options (extremely lacking in the alpha release), and online help documentation. This app definitely shows promise and will only get better with time — it should be an interesting battle between HotJava and NCompass.

INTERSOFT INTERNATIONAL

InterSoft International takes terminal emulation to the next level with NetTerm. This superb client offers many unique features in addition to the standard capabilities found in

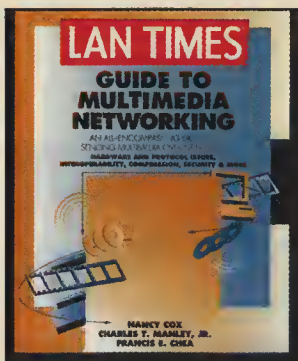


InterSoft International, Inc.

Desc:	One of the best telnet clients available — features remote host file editing
Pros:	Zmodem and kermit transfer support, remote host file editing, many user configurable settings
Cons:	Lacks multiple sessions capability, price relative to other freeware telnet clients
Location:	ftp://ftp.neosoft.com/pub/users/z/zkrr01/
Filename:	neterm???.zip
Status:	Shareware - \$20
Company:	InterSoft Intl.

most telnet clients. Included are an ftp server; kermit and Zmodem file transfer (send and receive); screen capture; remote host file editing and saving; VT100, VT220, and ANSI terminal emulation; and scripting capabilities (including several script templates). In addition, NetTerm offers an integrated phone book for storing information and quickly dialing your favorite telnet sites, bulletin boards, and internet providers. Like most other telnet clients, NetTerm has many user configurable settings and can automatically save these settings for you between sessions. At only \$20, NetTerm compares favorably to other telnet clients in terms of both features and price.

One of NetTerm's best abilities is remote host file editing and saving. Web page designers operating from a remote account will especially love this capability. NetTerm will allow you to edit a file with the local editor of your preference and then automatically save this file remotely when finished. This cuts out the considerable effort involved in repeatedly FTPing documents back and forth between local and remote sites, and at the same time it allows you to continue to use your favorite Windows programs. NetTerm does suffer some limitations; like CRT, in order to open multiple sessions, you have to launch additional copies of NetTerm — a process both time consuming and counter-intuitive. Also like NetTerm, some users may find their needs better met by freeware telnet clients like EWAN and Trumpet Telnet. Overall, though, NetTerm provides an extremely easy to use program for both your telnet and file transfer needs and is a client that will be praised by typical remote users and web page designers alike. ♦



BOOK BYTES by L. Detweiler

LAN TIMES' GUIDE TO MULTIMEDIA NETWORKING

by Nancy Cox, Charles T. Manley, Jr.,
Francis E. Chea
1995, Osborne McGraw-Hill
324 pages, \$29.95 USA
ISBN 0-07-882114-2
Ordering: 1-800-822-8158

Contents:

Part I: Multimedia Networking Essentials

Digital technology, PCs, networks, organizational uses and impact, multimedia hardware and software systems and standards, presentations

Part II: Exchanging Multimedia Files

File formats (audio, graphics, text, video), graphics languages, format translation, compression standards, CD ROM formats, delivery via Internet, WWW, etc., ISDN, online services, wireless, new or emerging network technologies, APIs, videoconferencing, collaborative environments, groupware.

Part III: Multimedia Network Management

Network tuning, LANs, network hardware, network segmenting, support and maintenance, training, support, server and storage management, multimedia databases, interoperability standards, bandwidth considerations, compression techniques, legal, privacy, and security issues, the networked multimedia application, development, analysis, and design, and prototype phases, vendor selection, procurement, implementation, maintenance, and review.

Part IV: Multimedia Networking Applications of Today and Tomorrow

Multimedia in entertainment, television, medicine, military, manufacturing, retail, WWW, retail networks, hotels, travel agencies, advertising, education and training, libraries and museums, law, publishing, finance, trends in multimedia networking, future technologies.

Includes glossary, Index, and suggested reading list.

The authors of this book all work at Lockheed Martin Corporation. They approach the complex, rapidly evolving subject of multimedia networking from a very practical, concrete angle that will appeal more to the industry professional than the casual hacker or hobbyist. The Internet and BBSs play a

relatively minor role in the subject coverage. This would be an excellent overview and general reference for anyone in a corporate MIS department who seeks to select and integrate computer hardware and network technologies with an eye to facilitating or optimizing their multimedia capabilities.

Much of the novice's difficulty in understanding multimedia is the wide array of elements and their rapidly changing nature. Multimedia is a synergy of network hardware, computer software, protocols and standards, as well as a variety of formats including pictures, video, audio, text, virtual reality, etc. This book would be an appropriate reference for someone to approach the subject in a broad, systematic way; it generally avoids technical minutia.

A large section of the book gives a step-by-step process a company manager would take in incorporating multimedia systems, even including such steps as cost/benefit analysis prior to its introduction. The authors give flowcharts for the managerial decisions at about a dozen phases they identify in the overall procedure. In contrast to more enthusiastic writers covering this area, these more conservative authors do not consider the role of multimedia in a corporation to be a "given" and have several sections that address the issue of simply justifying the overall expenditures in terms of quantifiable returns to a company (this analytical approach epitomizes the overall tone of the book). This is music to the ears of technology-weary managers who have to try to "realize the hype" and translate it all into improved productivity or some other tangible benefit for their company:

When do you "bite the bullet" and invest in new multimedia networking technologies? By the time you invest in a shiny new multimedia personal computer on every desk, the network infrastructure to provide robust and reliable access, and the various interactive multimedia applications, the tab could run into the millions, depending on the size of the enterprise. But, as time goes on and the cost of manufacturing gets cheaper, a high-speed multimedia network will be as commonplace as the telephone line is today. Therefore, "How long do I wait?" is a valid question. New technology should not be procured for the sake of having new technology. (p.286)

The book is well illustrated and the tables are meaningful and useful. One particularly comprehensive and valuable table, 5-6, provides a huge matrix of compatibilities between various file formats and a few dozen of the leading "multimedia" software packages (including desktop publishing, presentation software, drawing and illustration, authoring, video,

animation, virtual reality, and word processors). The authors tend to give overviews of various multimedia capabilities and then give tables of software titles that contain the enumerated features but do not elaborate in detail on the software packages.

The book is strong in describing and comparing all the different multimedia file formats, including the critical issue of compression technology. The chapter on the future of multimedia networking in various disciplines is highly relevant, and will help readers understand the tangible role that multimedia can play in their particular field. The glossary and index combined are reasonably thorough.

A surprisingly large part of the book is dedicated just to describing underlying network hardware components. At this stage of evolution of "cyberspace," bandwidth tends to be a major constraining factor in most multimedia projects. Some industry analysts have predicted that the future of networking may involve cheap and plentiful bandwidth. This prediction may be naive, although it does have a precedent: RAM costs once were very large and for software developers resulted in a liberal-coding-

style cramp, or at least a heightened memory consciousness. RAM prices began to plummet and the goal of significantly minimizing the memory requirements of software packages vanished seemingly overnight.

If network bandwidth ever becomes a "non-problem" this book's emphasis on network and software optimization techniques might look rather anachronistic in retrospect. Interestingly, the authors do not appear to consider or anticipate this development anywhere in the book. Certainly the significant consideration that must be paid to bandwidth constraints (or even "deficiency") by the integrator is today a strong factor limiting the completely unopposed proliferation of multimedia technology, as attested by the coverage and perspective of this book. The multimedia developer (and books) of the future may tend to focus much less on underlying hardware capabilities and much more on software features and standards. However, at least for this nanosecond, the book is a decent buy for anyone in its target audience. ♦

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Frank X. Sowa is president of The Xavier Group, an international consultancy providing strategic planning, forecasting, training, and development of business and communications systems for organizations since 1981. As a certified software consultant for Softarc's First Class, and a reseller for other companies, he configures customized BBS systems for organizations, complete with "regular content updates." Sowa is also founder and sysop of SEED.NET (412) 487-5449, "the online incubator" for small businesses, a seamless BBS-to-Internet (PPP) provider, with business start-up assistance and seed capital available online. **mailto:franksowa@seednet.com**

CYBERWORLD MONITOR

Frank X. Sowa

THE ORWELLIAN WORLD OF THE 1996 ELECTION SEASON

The 1996 Election Season is heating up, and the President, and the front-runners Bob Dole and Phil Gramm in the Republican Party intend to make the global control of cyberspace an important crux of their platforms. Attacking the traditional anarchy and freedom of the online world, these candidates have proposed sweeping controls and regulations over cyberspace that would increase the justice, commerce, and educational bureaucracies — while driving the small BBS entrepreneur who does anything more than use his BBS for "CB-radiolike hobby" purposes — nearly out of business.

In October, as the traditional election season got underway, all three candidates, responding to a national Gallup Poll that showed that while only 3% of the population is "connected," 57% of the adult population is in favor of "some sort of controls on activities in cyberspace," stumped on platforms that spelled control and policing of the online world by the Federal police and intelligence agencies for "cyber-criminals," increased controls and even elimination of encryption privacy in cyberspace, and the new concepts to "certify" and/or license online service providers.

While civil libertarians — and organizations like the Electronic Frontier Foundation attempted to be heard over the deluge of attacks on cyberspace, explaining that arrests made by the FBI after raids conducted via America Online "show that the existing system of laws worked." The candidates went before groups like the Christian Coalition, the United Nations, and the Church of Scientology and presented platforms that showed clearly that none of the candidates plan to leave the online world alone.

In an even darker spin, these same candidates are using the Internet to capture votes. Like what the Ayatollah Khomeini did with beamed satellite messages during his exile to gain acceptance in Iran as a traditionalist Muslim leader and a person opposed to the "Westernization of his beloved country," both political parties and every candidate are using elaborate "home pages" on the World Wide Web, which typically spew out photos, position papers, news releases and even video snippets from speeches, to sway the online voter in their favor, and convince those of us who frequent cyberspace that they are really "hip" to our needs.

In reality, their views of government probably clash with our needs. So far, the "spin" of the attackers has gone as follows:

CYBERSPACE HAS BECOME A HAVEN FOR THE CYBER-CRIMINAL — FROM HACKERS AND CRACKERS, TO CHILD-MOLESTERS AND SEXUAL PERVERTS, TO FOREIGN SPIES. THEY MUST BE STOPPED!

Everyone thought that once the scam created by Marty Rimm and his "Cyberporn Study" was exposed, the Exon Amendment and other government schemes to crackdown on cyberspace would go away. Not so. As this publication goes to press, the support in Congress for more Exon-type legal manipulation is actually growing — again supported by polls of a society that is for the most part ignorant of the online world. According to at least three Congressional aides who I talked with for this article, some form of the Exon Amendment will "most likely be included in the final version of the Telecommunications Act of 1995." My question to you is, as an online user or provider, what actions are you going to take to make yourself be heard on this potential attack on your online privacy — before it's too late to take action?

In his speech before the Intelligence Community in August, President Clinton expressed fears over what he called a new kind of criminal — the "cyber-criminal" and laid out the ways he intended to turn loose the broad powers of the intelligence community in the economic world of the Internet to "spy-on" electronic activities and track down those who would use cyberspace for illegal activities and gain, and bring them to justice. In a related occurrence, in October, a New York Times article revealed to what extent the government would go with this new empowerment, when it revealed that the CIA listened in on phone and electronic mail transmissions of the Japanese trade ministry to get the upper hand in the automotive sales agreements. For many Americans, this seemed to be okay because we like to see the government playing an active role in bashing the Japanese. But, for those of us who frequent cyberspace, we should really think about the precedents that were established here, and what our current Federal Government feels is "appropriate" legal behavior in cyberspace on their part.

In a speech before the United Nations in October, Clinton asked the world community to band together to establish new UN powers to fight global criminal activities.

As a component of that attack on global crime, he cited his own new use of emergency powers to strike at Colombia's Cali drug cartel.

But, according to White House Aides, these new directions in national security are just a small part of a larger scheme. They say "his goal is to forge a link between domestic and foreign concerns that will strike a chord with an increasingly isolationist American public to accept an evolving concept of U.S. foreign policy which is tied heavily to the activities of the United Nations, and which is focused on updated assessments of security threats." They also said that this new direction includes "the threats that are occurring in cyberspace."

Hence, the president outlined a different sort of 21st century global initiative in his speech at celebrations of the United Nations 50th birthday. He focused on a drive against drug dealers, other international criminals and terrorists. "Nation states are still the most important actors in the system, and so you need UN involvement, but now we have a whole plethora of other forces, such as multi-national corporations and the online community", he said. "You begin to see the outlines of how one might think of foreign policy in very very different terms." The new theme of 21st century foreign policy goals has been evolving for nearly a year in weekly brainstorming sessions among a small group including Deputy Secretary of State Strobe Talbott, the chiefs of staff of the secretaries of state and defense and other officials.

This theme will dominate political debate in the months ahead.

PRIVATE ENCRYPTION SCHEMES MUST BE TOTALLY ABOLISHED BY NEW LAWS THAT EMPOWER CRIME

PREVENTION BY THE POLICE AND INTELLIGENCE COMMUNITIES

Earlier this year, the media revealed a government plan to outlaw private encryption by 1) relaxing export controls for commercial key-escrow products, 2) allowing only "government certified" commercial key-escrow products to be exported, 3) outlawing all forms of private encryption other than those deemed government certified and licensed. Covered in most national newspapers, this expose received little attention.

Tied to some of the special interest lobbying that is taking place while the new Telecommunications Act is being debated in Congress, this move by the administration was seen instead as an approach for the government police to get what they want in return for throwing the industry a highly-desired export bone. What it means to the individual in cyberspace, is that the Federal Government is positioning itself again in a manner to know everything about you and every transaction you undertake online from e-mail interceptions, to financial transactions. In an Information Age, where commercial transactions become commonplace on the Internet, such a government approach is clearly Orwellian.

But, tied together with the anti-terrorists electronic wiretapping and listening laws already legalized, and with licensing venues and regulation, this concept becomes even more ominous.

CYBERSPACE MUST BE CONTROLLED IN A TOP-DOWN FASHION

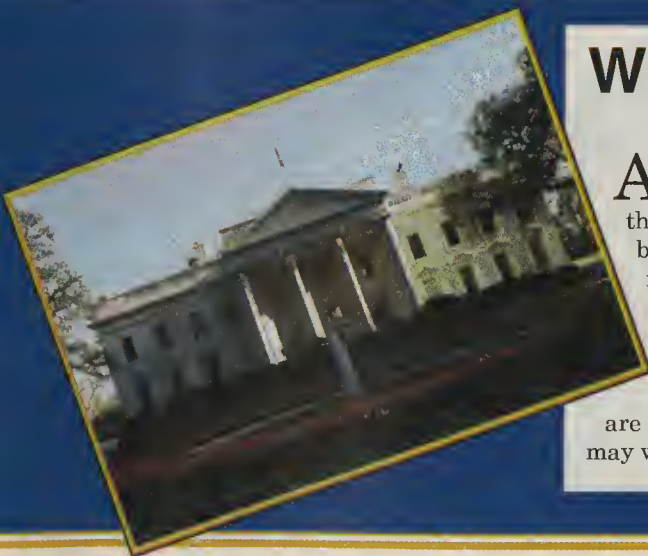
BY NEW REGULATIONS AND LAWS THAT WILL AID IN ASSISTING THE INVESTIGATION OF CRIME IN CYBERSPACE, THAT WILL "GUIDE" CONTENT, AND THAT EVENTUALLY LEAD TO THE CERTIFICATION OF ALL ONLINE SERVICE PROVIDERS

Commerce, Education, the Intelligence Community, State and Defense have been brainstorming on this one. Interestingly, those who've taken the point in advancing such arguments in the White House, are those that have the least exposure to the online community. But, basically the concept has become very clear. In order to stave off a horrendous state of affairs in the U.S. — a society of informational "haves" and "have-nots" the Administration, political candidates and Congress are readying plans for a number of licensing and tax schemes that serve a dual-purpose of regulating content on the Net and that supply billions of dollars for the educational bureaucracy to wire every classroom by the year 2000 (even though studies support that online educational growth will occur in the home). Clinton has announced plans to tax new computer sales next year, and the Commerce Department has forwarded plans to use the FCC to regulate and license all online service providers — and to control online content.

Meanwhile, some in Congress, like Exon, are continuing to cook up new schemes on how they might control content via government certification and licensing schemes. Tied to Clinton's requests for UN support, and you begin to see the global ramifications of all this.

WHAT CAN YOU DO?

Again, all candidates and parties in this coming election year already understand the power of threads on the Internet. In an election year, no candidate wants to be in a position to lose the support of the millions who frequent the online world. This is the best time of the election cycle to be heard in a big way. It could prove to be the battle of your long-term livelihood. But, candidates and parties, stung by the potential of a populists movement around a third-party candidate are more likely to listen. Here are some of the places you may want to contact:



OFFICIAL WEB SITES

PAT BUCHANAN

<http://www.buchanan.org>

BOB DOLE

<http://www.dole96.com>

PHIL GRAMM

<http://www.gramm96.org>

LAMAR ALEXANDER

<http://www.nashville.net/~lamar>

RICHARD LUGAR

<http://www.iquest.net/lugar/>

ARLEN SPECTER

<http://bizserve.com/specter/>

DEMOCRATIC NATIONAL COMMITTEE

<http://www.democrats.org>

REPUBLICAN NATIONAL COMMITTEE

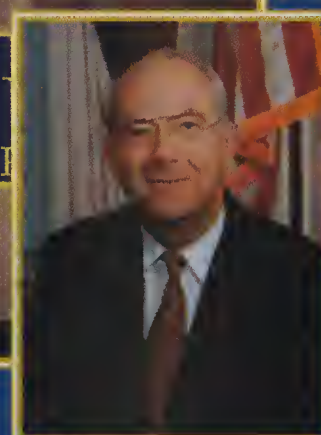
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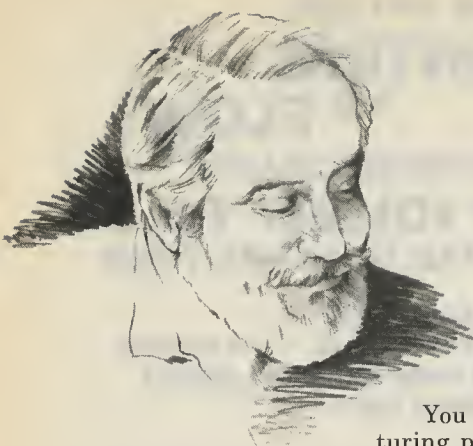
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GOVERNMENT ACCESS by Jim Warren

GOVERNMENT! — OF, BY AND FOR SPECIAL INTERESTS

I told ya so!

You remember the old days before posturing politicians pandered to fearful parents, proposing draconian censorship for all the world's online conversations and content? Before Senator Exon decided to outlaw "indecent" communications that were "annoying," if assisted by a telecommunications device?

Remember the days before Patent Commissioner Bruce Lehman kowtowed to patent lawyers' zeal to patent absolutely every thought no matter how trivial? For example, TRW says that a patent it holds has "in effect reserved to it, the exclusive right to use the medium earth orbit, MEO, for mobile satellite communication systems," according to Greg Aharonian, Internet Patent News Service, <mailto:patents@world.std.com>. IBM's patent 05317757 appears to cover any use of a finite state machine. California mathematician Roger Schlafly has functionally patented two numbers — each about 150 digits long, helpful in modular division. (There's much more!)

The politicians and their corporate and lobbyist owners have obviously concluded that the Net and its nerds are politically defenseless and easy pickin's.

As with the nation's "indigenous peoples" (that's Correct Speak for "Indians"), technology's natives are being attacked at ever-increasing speed:

CONGRESSIONAL STUPIDITY

For decades, the Office of Technology Assessment (OTA) provided technologically-illiterate congresscritters with objective, non-partisan advice and insight on a huge range of complex technology policy issues about which they were eager to legislate. Now, in a fit of incredible arrogance and myopia, the Republicans killed OTA. It's gone! Dead! Kaput! Perhaps the Repubs felt threatened by having any iota of technical intelligence contradicting the proposals paid for by corporate lobbyists such as the telecommunications and energy cartels.

ADMINISTRATION IMPOTENCE

In 1993 and 1994, the administration issued high-profile directives that should have made computerized federal public records, in fact, public — including computerized copies. And if the kid in the White House had ever stopped inhaling long enough to play soldier, he might have heard that the President is supposed to be Commander-in-Chief. But he obviously has no control over his Air Force.

For more than three decades, the Err Farce has spent oodles of millions of dollars creating and maintaining one of the first computer-aided legal research (CALR) systems, called FLITE — Finding Legal Information Through Electronics. It began in 1961 under JFK, as a federally-funded project at the University of Pittsburgh, but by 1964 had become an Air Force operational project. Currently located in Alabama, it employs about 25 full-time tax-paid staff.

"The President is supposed to be Commander-in-Chief. But he obviously has no control over his Air Force."

More than a decade after FLITE began, a private sector corporation created Lexis (in 1973) and in 1974, competitor West Publishing (law books) created their platinum-priced Westlaw

CALR system — in part using decades of computerized legal data that the fly-boys gave to West, which has been a major Democratic contributor. The FLITE system includes Supreme Court decisions all the way back to 1937, plus administrative law and all sorts of other legal goodies — mostly public records; laboriously computerized and maintained at massive taxpayer expense.

But now — blatantly ignoring their so-called "Commander's" public-access pretenses — the birdmen refuse all requests for digital copies of their computerized public records, even including FOIA demands (Freedom-of-Information Act). Sez they, "Go re-key 'em from law books" published by West, or if you can afford it, download from Lexis or Westlaw; but the latter zealously defends its "copyright" of key components of federal court information.

These choice tidbits came from Jamie Love, the bulldog Executive Director of Ralph Nader's stellar Taxpayer Assets Project, <mailto:info@tap.org>.

JUDICIAL ARROGANCE

Although probably every federal court in the land prepares its decisions on word processors, less than 5% of them make their rulings available on BBSs or otherwise online. Ya want 'em in computerized form; ya gotta re-key 'em or pay rip-off prices to the high-profit online peddlers.

When Federal District Court Judge Stanley Sporkin rendered the widely-publicized decision that briefly voided the Clinton Anti-Trust Division's cozy settlement with Microsoft, numerous industry legal beagles and business and technology reporters asked for copies online, or at least on diskette. "Screw you!" sez judge-for-life Stanley, though not exactly in those words.

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Warren [345 Swett Rd., Woodside CA 94062; <mailto:jwarren@well.com>] works on technology-related civil liberties and open-government advocacy, and currently serves on the California Secretary of State's Electronic Filings Advisory Panel.

Warren has received the Dvorak Lifetime Achievement Award (1995), the Hugh M. Hefner First-Amendment Award (1994), the James Madison Freedom-of-Information (1994) for his efforts to open online access to government, and the Electronic Frontier Foundation's Pioneer Award (1992). He founded InfoWorld and the Computers, Freedom & Privacy conferences (1991); was founding host of PBS television's "Computer Chronicles" (1981) and founding Editor of *Dr. Dobb's Journal of Computing* (1976).

NEWT'S SHAM

When Gingrich became House Dictator, he said all the House's public legislative records would be available online on "his" new system, called Thomas, as soon as they were available to Members and lobbyists. Ha! Formal legislation is usually available in a timely manner on Thomas — especially if it's not controversial or embarrassing.

But really important policies are often crafted via "recommendations" and "resolutions." These are moved (introduced) and much of their discussion and mark-up is concluded without them ever appearing on Thomas. Copies are printed and given to Members and lobbyists — just not to the Great Unwashed beyond the Beltway, who pay their costs. After the insiders finish most of the details, only then are they re-introduced as bills — finally visible online to us peons.

Rep. Bill Archer's (R-TX) \$38-billion, 500-page tax bill was processed this way. As an example of a special-interest goodie buried in it, corporate pension funds could reduce their pension escrow from 150% down to 125% of their long-term estimated liability — and if the estimate's wrong, well, the pensioners can suck wind! When he was pushed to make the details — that lobbyists and insiders already had — available on Gingrich's highly-touted Thomas, Jamie Love reports that Archer's staff said, "It's too long to give to the public."

LOCAL RIPOFFS

Thousands of government agencies are facing conversion from print records to electronic records, especially the issue of how to make computerized public records available to the public. Most of them want to convert, and are quite willing — often sincerely eager — to make their public records available to the public in computerized form.

But the dominant theme in local and state government, over and over, is that (a) they don't have as much money as they would like to have (unlike

the rest of us!) to fund the conversion and access, and therefore, (b) they want rapacious profits from peddling the public's records in their useful, modern form —

back to the tax-payers who paid to create them. This has the seductive characteristic of generating a non-tax-based revenue stream — at the subtle but outrageous social cost that useful knowledge of and access to government becomes limited only to those who can buy it.

Private-sector privateers — companies seeking agency-granted monopolies over the public's records — are suckin' up to the administrative decision-makers like you wouldn't believe! Sez they, "Hi there, cutie! — Just hop into bed with me, and I'll give you a big allowance and take care of all your problems, as long as I'm the only one who gets to caress your most valuable parts."

The State of New Jersey just finished giving West Publishing monopoly control over its administrative codes and regulations. Ya wan' a copy of New Jersey's regs? — ya pay West through the nose! And West gives a little kick-back — uh, "royalty" — to the state.

West and the other private-sector hustlers are NOT to blame in this outrage. Business exists for one and only one purpose — to make money by every legal means. The folks to blame are the bureaucrats who were dumb enough and/or arrogant enough to thus choke public access to the public's records — and the legislators and Governors who demanded too much and funded it too little.

The New Jersey give-away is a done deal. However, the funds-strangled administrators of codes and regulations for the other 49 states are well aware of it. Many are terribly tempted by it, and are being wine-d and dined by the data pirates, big time!

Will your state's computerized records be available for free or at no more than incremental agency cost of providing access? Or are government-made monopoly profiteers going to limit your access?

FEDERAL "PRIVACY"

While the big concern about public records at local and state levels is whether and how much to charge for them, federal agencies seem primarily concerned about balancing privacy and freedom-of-information mandates. There seems to be uniform agreement on all sides: public access is losing.

The 1974 Privacy Act — which predates massive computerization — creates endless problems, questions and contradictions for

even the most well-meaning and diligent of agency FOI and Privacy Act administrators. Much of the guidance — such as it is — for applying the antiquated Privacy Act to modern government records comes haphazardly and piecemeal from federal court decisions, and an endless swamp of FOI and

Privacy Act litigation creates a morass of confusing directions. Administrators are leaning more and more towards suppressing access to avoid privacy claims by contingency litigators.

Then there's the issue of agencies using "privacy" to avoid releasing embarrassing documents. In September, I asked a Department of Justice attorney why they were refusing to release — to a Congressional committee — their internal investigation of the Ruby Ridge / Randy Weaver shoot-out. He said an unofficial copy was on the Internet, but they couldn't release it because they had to protect the privacy of the principals — Randy Weaver!

TIME FOR A CHANGE

Republi-crats or Demo-publicans — I can't tell much difference. Neither can the Beltway bandits. Contribution records show many of the biggest lobbyists immediately re-directed their purchasing power to senior Republicans as soon as they took control from senior Democrats.

"It's time for a third party — maybe a fourth — and removal of most long-term incumbents."

It's time for a third party — maybe a fourth — and removal of most long-term incumbents. It can happen — the Democratic and Republican parties were created in the 19th Century, after the two established parties proved to be incompetent and intransigent.

Since the Demos and Repubs have granted themselves \$60 million tax dollars each for their presidential campaigns, Perot's offer to underwrite the costs of creating a third party seems tolerable — especially if he's not the candidate.

Within a week of Perot's announcement, copies of the petitions needed to qualify the new party were already being circulated on the Nets. No other mass-distribution medium could have responded that widely, that fast nor that cost-effectively.

The Nets are potent tools for end-running the established print and broadcast press, and for organizing grassroots action.

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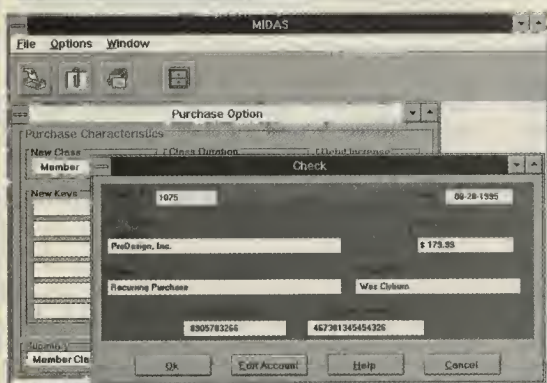


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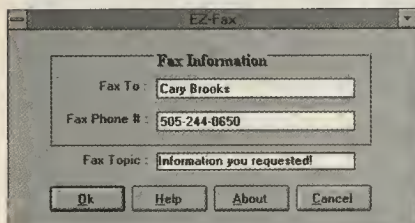
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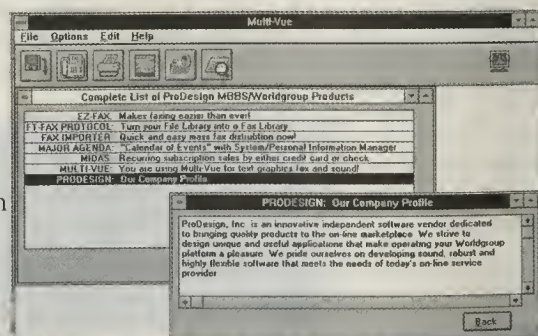
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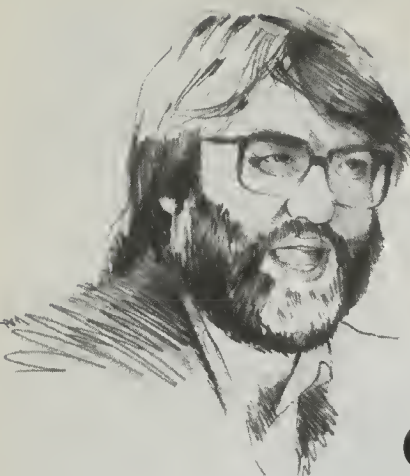
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LEGALLY ONLINE

by Lance Rose, Esq.

CHILD PORNOGRAPHY AND POLITICAL AGENDAS

FBI: THE ART OF THE ELEGANT RAID

Government agents are at it again, arresting people for what they do online. In September, 1995, the FBI arrested dozens of people across the country on charges of trafficking in child pornography. They call their investigation *Operation Starburst*, and made a point of publicly associating it with America Online. Apparently, much of the investigating was performed there, and many of those arrested were AOL users. The FBI reportedly used time-honored investigatory techniques, such as sting operations where agents posed online as both purveyors and seekers of child porn. This was no flash in the pan; the investigations supposedly took two years.

General opinion on this is mixed. Net users don't want to see the online world subject to incessant police attacks. Indeed, it would be nice to see the Justice Department, FBI or Secret Service do something constructive in cyberspace for a change, and stop attacking people who use their modems. On the other hand, who wants to endorse child pornography? Even staunch defenders of Net liberties will make some room in their principled defense of free speech and agree that child pornography is not something they can really support. There is also a large and growing contingent of online users, especially the more recent hordes of Web and large service users who come in from the cultural mainstream, who seem to perceive the Net as some kind of primitive television system. They will cheer on all efforts to keep online services as family-friendly as broadcast TV.

But the FBI raids were far more than just bagging some degenerate child pornographers. They are also a calculated effort to influence two important areas of pending federal legislation that are deeply important to life on the Net: (1) regulating online systems to control access to adult materials, and (2) limiting our ability to send truly secure encrypted messages to others. That the FBI could kill both these birds with the single, expertly pitched stone of a child pornography operation must count as a stroke of genius.

On the adult materials side, at the time of the FBI raid (and as we go to press) Congress was preparing to reconcile several different regulatory bills that it voted into law during the summer of 1995. These bills partially contradict each other, requiring Congress now to synthesize a hybrid, final regulation. They include the famous Exon Amendment (also known as the Communications Decency Act)

requiring online services to keep pornography off their systems; the Dole/Grassley bill, which goes further than Exon in criminalizing online distribution of pornography; the Cox/Wyden bill, which permits online services to edit their message and file bases without automatically becoming responsible for all materials on the system; the Leahy bill, which calls for lawmakers to study the matter of adult materials further before making any new laws about them.

The hybrid law resulting from Congress' deliberations might be moderate or it might be harsh towards online systems, depending on the mood of the Congressmen and their constituents. One recent, deliberate attempt to manipulate legislators' views was the now-discredited "cyberporn" study by Carnegie-Mellon student Marty Rimm. It received front page treatment from *Time Magazine* for supposedly demonstrating with academic rigor that the Internet is rife with pornography, but was subsequently unmasked as a grossly deceptive effort to breed public paranoia about adult materials on the Net, and stimulate heavy regulation.

We can now count the FBI's Operation Innocent Images as round two in this effort. The FBI made sure the public knew these raids largely involved child pornographers using America Online, the best-known large online service. The message is: if even America Online can harbor child pornographers, then nowhere is safe. The sooner we clean up the place, the better. The FBI and Justice Department aimed this message directly at the Congressmen who will reconcile the pending adult materials laws, hoping to obtain: (1) harsh new laws against any transmission or storage of adult materials online, and (2) increased enforcement powers for government agents against adult materials. It is also likely the message got through. Because the FBI child pornography raids "demonstrated" that the Net is rife with illegal adult materials, we will likely face more extreme and burdensome regulation of online adult materials, which will also burden online activities generally.

The other goal of the child pornography raids was not apparent at first. But it became clear a week or two afterwards. At the International Cryptography Institute conference in Washington, D.C. (as reported by David Sobel of EPIC), FBI director Freeh claimed that people using cryptography software to protect their privacy online are frustrating law enforcement. Among the standard examples he gave to inflame the audience's passions (such as the one about terrorists plotting on the Internet), he now added that certain materials seized by the

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FBI during the *Innocent Images* raids were encrypted.

Someone in the audience asked why that was even important if the arrests were made anyway, but he received no real answer from Freeh. Why should he? The FBI was not making a rational point about encryption for purposes of public debate. Freeh's goal was to mention strong cryptography and child pornography in the same breath, hopefully to cause legislators and the public to make the same association in their own minds.

It is no coincidence that the FBI and Justice Department are also currently pushing a bill to outlaw the public use of encryption, unless the government has the ability to read all encrypted messages. This initiative is becoming known as "Clipper 2," and this time it's the real thing. The original version of Clipper was the federal government's own cryptography software, developed to be cracked by government agents. The government attempted to establish Clipper in the open market as a standard for protecting electronic privacy, even though more secure alternative software could also be used. When it was repeatedly pointed out that no one in their right mind would use Clipper if more secure alternatives were available, the government made the dim response that some criminals would be dumb enough to use Clipper anyway, so it would be useful against them.

This stated position was so appallingly stupid (don't you want to catch the smart terrorists even more than the dumb ones?), it was clear that the government officials themselves did not believe it. Observers knew it was only a matter of time before the government realized its open market approach to foisting Clipper on the public would fail, and would move on to mandatory measures to reduce electronic privacy. That time is now. And in its zeal to win the war on encryption, the FBI has brought in the hot button issue of child pornography online, adding fuel to the fire in what is destined to become an enormous debate on how much privacy we will get to have in the online world.

So it turns out that the FBI has managed to make *Innocent Images* into a central event shaping the emerging legal regulation of the Net. It is hard to imagine a better designed initiative than *Innocent Images*. The public will readily accept these raids as valid — no one will complain about putting away

child pornographers. It's scary as hell — they found these guys in America Online, our own backyard! And it will provide the FBI with strong support for laws that will both "clean up" adult materials from the Net (at least the mainstream), and make private discussions on the Net far more permeable to snooping government agents.

THOU SHALT NOT SKETCH

Speaking of child pornography and irrationality, check out the *Child Pornography Prevention Act of 1995* (S. 1237), currently in the Judiciary committee of the Senate, awaiting hearings. This amazing bill, sponsored by Senators Hatch, Abraham, Grassley, and Thurmond, seeks to expand the reach of the child pornography laws in a new direction. If enacted into law, it would criminalize all pictures showing children in sexual situations, regardless of how they are created.

According to sponsor Orrin Hatch, this law is necessary because, "Federal law has failed to keep pace with technology," while "the purveyors of child pornography have been right on line with it." His problem is that modern computer graphics enables smut peddlers to graft images of kids' heads from perfectly innocent photographs onto images of people involved in lurid sexual acts. From there, his theory seems to go, adults will use these fabricated pictures of kids in sex scenes to lure real kids into child pornography and sexual situations. So in order to protect these kids, we need a law prohibiting the smutmeisters from crafting their sex bait in the first place.

What is wrong with this? Everything. It has to do with our existing adult materials laws and how they are limited by the First Amendment. The primary regulation of adult materials is through obscenity laws, which make it criminal to make, send or receive certain extreme sexual materials, based on their contents. Under the First Amendment and its protection of freedom of speech, the Supreme Court declared that government cannot freely declare anything "obscene" just because it has sex in it. The materials in question have to "appeal primarily to the prurient interest" according to local community standards, and lack any serious artistic or other merit, before free speech will be abridged to allow for a criminal violation by those materials.

There are also indecency laws, which are becoming increasingly common. These laws are also directed at the contents of sexually oriented materials, but are directed at limiting the exposure of these materials to children. The First Amendment steps in here as well, with a requirement that laws that seek to restrict access by children to questionable materials must be designed so that adults are not prevented from full access to those materials.

Finally, there is the existing federal child pornography law. It is very different from obscenity and indecency regulation. Instead of focusing on whether the contents of the materials are so sexually extreme that they must be regulated, it looks at whether children were used in the production of the materials. Its aim is to prevent sexual abuse of children, not to regulate what images people see. For this reason, the existing child porn law sidesteps First Amendment problems because it is concerned not with "speech" (the contents of the materials) but an "act" (the use of minors in making sexually oriented materials), which is not subject to First Amendment protections.

However, Hatch's new amendment to the child porn law would bring it back squarely within First Amendment constraints. Regardless of his theory that fabricated pictures of children having sex will be used to lure real children into abusive situations, the fact is that his amendment seeks to regulate fabricated pictures solely according to their content, and not how they were created. As such, they cannot be freely regulated. Despite what the sponsors of this bill may think, our freedom of speech law in this country will keep them from prohibiting all pictures involving kids and sex.

The empty sophistry of Hatch's position, and the ultimate futility of asserting this proposed new law against both the clear requirements of the First Amendment and the fact of adequate coverage by other existing laws, could be readily made plain to him by his aides. This leads us to wonder what's really afoot here. Is it simply pandering to moralists, or is this proposal really a bargaining chip, for use to get something else of value from increasingly panicky online and information services?◆

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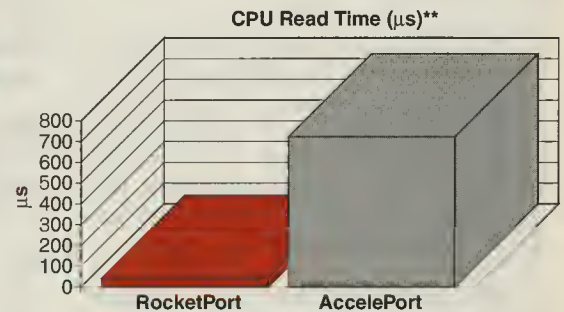
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by Jon Eckenrode

I knew they'd offer me the job. We'd gone through three interviews, lunches together, reference checks, the works. But I wondered: when it came time to negotiate compensation, would they say the three words every prospective employee wants to hear most — FULL INTERNET ACCESS.

The Human Resources director opened with a detailed description of the company's comprehensive benefits package. She talked about healthcare coverage — major medical, dental, 100-percent paid prescriptions, full dependent coverage, health club membership.

She explained the vacation policy (four weeks the first year), the holiday schedule (I think she mentioned Arbor Day), the company's high-performance 401(k). She covered it all — from unlimited tuition reimbursement to free pop in the cafeteria.

Very impressive, I thought. But let's get to the point — Gopher, ftp, USENET, the Web.

The hiring manager was up next. The protruding Adam's apple gave me hope. He immediately made a salary offer. I thought I'd died and gone to the NBA.

Without waiting for a response, he launched into a long-winded speech about career paths, company growth, stock options, management opportunities. He concluded with an enthusiastic pitch about the company's generous bonus plan.

I could only nod. I was getting restless. I hadn't checked my e-mail all day.

They looked at me expectantly. Okay, I thought, let's get serious. "What about Internet access?" I asked.

Their smiles faded. The HR director's eyes narrowed. The hiring manager's Adam's apple bobbed up and down.

NET WORTH

"All of our employees have the ability to receive Internet e-mail right at their workstations," he explained cautiously.

Right at their workstations? Imagine that. "Surely, such rudimentary access applies only to nontechnical staff (like the CEO)," I replied.

"Well," he said reluctantly, "if an employee can demonstrate a legitimate business need, we can authorize outgoing mail privileges as well. Of course we expect that it will be used for business purposes only."

"Of course," I agreed. I looked at the HR director. She nodded approval.

"I think that staying current with the latest bug fixes, device drivers, and so forth is essential," I said. "It helps avoid a lot of software-related problems. File transfer protocol would enable me to easily obtain software updates, utilities, online documentation, all kinds of useful files."

"No, no," the hiring manager said with apparent anxiety. "Our IS people would have a fit. They hate it when ..." The HR director touched him on the arm.

"We believe in empowering our employees," she said earnestly. "I can see where we might even experience a cost savings if you're able to maintain your own workstation without calling on IS staff."

Excellent. "Then you'll understand my need to access the World Wide Web," I added quickly. "The Web is the future of the Internet. It's a fountainhead of information. If you're really serious about employee

empowerment, you've got to provide Web access."

Taken by surprise, she nodded slowly. She'd walked right into that one.

"And I assume I'll be able to tap into a dedicated T1 line," I continued. "The Web just isn't productive without plenty of bandwidth."

"T1, of course," the hiring manager blurted out. He tugged at his shirt collar. Beads of perspiration were forming on his forehead.

I was on a roll. Guess I might as well go all the way. "I often take work home and inevitably need to access files on my workstation or the network," I said. "ISDN to my home would greatly enhance my ability to be productive while away from the office."

The HR director answered quietly. She seemed very tired. "We've found that our investment in equipment and services for high-performing employees generally pays off in increased productivity. So I don't see a problem."

Cool. Oh, one more thing. "I assume Net access is unrestricted," I said matter-of-factly.

"No!" she almost shouted. "We block access to selected sites. It's corporate policy. It applies to everyone."

Hmmm, I thought. I'm not sure I like that. It certainly doesn't inspire a sense of trust.

Again they looked at me expectantly. I could tell they'd reached their limit. Okay. "You've got a deal," I said.

Their smiles returned. We shook hands. Their palms were sweaty; their grips, weak.

I was glad just to have it over with. I'd gotten pretty much what I wanted. But maybe I can do a little better at review time, I thought. Let's see — no access restrictions, Internet phone, an ATM link ... ♦

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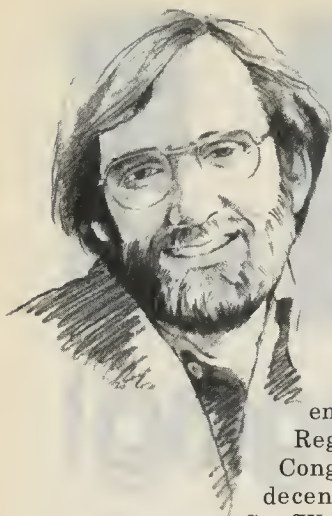
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EDUCATION LINK

by Rea Andrew Redd

CMU WRESTLES WITH CYBER-SMUT

Making cyberspace safe for children and young adult students is a job for parents, business, Congress, and schools. Regulatory legislation is being offered in Congressional committees addressing online decency; America Online is implementing SurfWatch's blocking software. The House of Representatives' Science Committee is viewing demonstrations by Internet providers and online software services of how users can protect themselves from electronic indecency. At a major university, a computer may soon be labeled a new library as the faculty seeks to balance censorship and pornography laws.

Carnegie Mellon University's (CMU) faculty senate wants the school to declare its computer a library to protect it from intrusion as the government enforces obscenity laws. University President Robert Mehrabian received the faculty's request when the senate met to discuss a CMU committee's proposal that the school block outside computer newsgroups that contain pornographic images. Under most obscenity laws, a computer system is not held liable if it unknowingly carries pornographic images. Since an undergraduate researcher this year informed the president of the newsgroups' existence on the university computer, CMU realized that its status changed from not knowing to knowing. At that point, the university became liable.

By declaring the computer a library, the university hopes to avoid breaking obscenity laws. Most anti-obscenity laws exempt libraries; this is true in Pennsylvania, where the school is located.

Is a university/school computer a library? No. A library selects materials for reading and research. A university computer randomly accepts materials without discretion. If CMU designates its computer to be a library and tries to protect it against obscenity laws, then every legislator who wants to cut an education budget will have a popular, headline-grabbing reason to wield a heavy fiscal axe. Let's write a few of those headlines:

**CONGRESSMAN BLOCKS BUDGET BILL;
VOWS "NO MONEY FOR PORN"**

**CONGRESSIONAL COMMITTEE SEARCHES
LIBRARY COMPUTERS FOR PORN**

If CMU had its wits about itself, it would choose the easy way out. It happens that the easy way may also be most pragmatic and the most morally upright. CMU, since it now "knows" about obscene bulletin

boards, should ban and block them from its computer system as any K-12 school district does. It should then allow any student or faculty to seek another provider for such computer services.

If someone feels it necessary to have access to an obscene newgroup or BBS as a part of their educational experience, then let them pay for it in addition to the university's tuition and fees. This solution protects the university from randomly accumulating pornography in its electronic library. As any librarian will tell you, a collection policy for the library is essential. A policy that allows a library to collect pornography is a policy that will put the librarian in hot water.

To designate the university's computer as a library is a morally cheap way out of a legal dilemma. This proposed solution could well become expensive for CMU as politicians, national library professional organizations, feminists, and child abuse prevention specialists all find something in common about which to complain.

TOP TEN REASONS WHY...

Library professionals should connect to the Internet, as proposed by the American Association of Librarians (AASL):

1. staff development opportunities
2. empowerment of students
3. availability of free instructional resources
4. access to full-text sources
5. improved credibility with other faculty members
6. chance for experiential learning
7. access to new software and technical information
8. new way to communicate with community members
9. opportunity to participate in a global dialogue
10. terrific way to learn!

This past summer the ASL, a division of the prestigious American Library Association (ALA), and other organizations including library-automation leader the Winnebago Software Company, launched a three-year initiative to facilitate students', library professionals' and teachers' use of the Internet. Online Internet courses, grants, mentors, and a help/referral service for students are the focus. The online courses, geared for K-12 library media specialists, started up two months ago and are available to those with Internet e-mail access. Basic Internet skills lessons and collaborative curriculum projects are offered on a four month cycle through ICONnect Listserv. To

receive information about the courses and schedules, <mailto:IBASICS@eric.syr.edu>

Grants up to \$500 are being awarded to AASL members who collaborate with classroom teachers to develop curriculum projects that focus upon the Internet as an information resource. Grant money for travel to state and national conferences is available also. Applications should show creativity, clarity and completeness and be postmarked by December 31, 1995. Call (800)545-2433, extension 1390 and ask that an application be faxed to you.

The mentoring program for library media specialists and the question-and-answer service for K-12 students will be up and running in January 1996. Using e-mail, students and professionals will be able to contact a library media specialist to get help in using the Internet. Questions left on a bulletin board will be answered within 48 hours by a library media specialist. To take advantage of either the Internet Curriculum adviser for professional mentoring or the KidsConnect for student help:

<mailto:ICONnect@ala.org>
<gopher://ericir.syr.edu:7070>
<http://ericir.syr.edu/ICONN/home.html>
ICONnect
American Association of
School Librarians
American Library Association
50 East Huron Avenue
Chicago, Illinois 60611

If videos are your curriculum forte, then call the Winnebago Software Company (800)533-5430, extension 634 or write to 457 East South Street, Caledonia, Minnesota 55921 for information on an award-winning kit containing two 30-minute videos and a training guide on the topics of Internet connections, providers, e-mail, online chat groups, gophers, file transfer, and Telnet.

COLLEGE PLACEMENT SERVICES GO ONLINE

Beginning this autumn, a consortium of 21 universities and colleges in the southeast U. S. have opened a site for over 400,000 students and alumnae looking for employment. Employers can search <http://www.virginia.edu-seacnet/> for resumes from any of the affiliated schools. By specifying major fields, grade point averages, and interest/specialty fields, employers can narrow the range of applicants. Those look-

ing for jobs can use the site to examine hundreds of employment postings at any of the 21 schools.

YAHOO! AND NETTEACH NEWS UPDATES

The Yahoo! Web guide — <http://www.yahoo.com> — has added new graphics, searching tools, Reuters News Media and new categories. With over 60,000 entries and over 500 submissions a day to consider, Yahoo! is fast becoming some educators' favorite place to introduce students to the Web and retain their interest.

NetTEACH News, covered in October's Education Link, has a new address; for general inquiries and subscriptions try <mailto:netteach@chaos.com> and for the editor <mailto:kmr@chaos.com>.

FOR THE K-12 BROWSER

Check <http://www.unitedmedia.com> to view Snoopy, Charlie Brown, Linus and Lucy in the Peanuts cartoon strip. Can't wait for the 1996 Olympics in Atlanta, Georgia to begin? Try <http://www.atlanta.olympic.org/index.html> for a virtual "fly-through" of the Olympic Stadium, FAQs, the official programs and products. As winter storms creep up on us, you can stage an indoor and electronic scavenger hunt; visit The Family Surfboard at <http://www.sjbennet.com/users/sjb/surf.html> and find software projects, links from Manhattan to Maui, and downloadable software.

At <http://www.pathfinder.com> you can use Time Warner's site to locate Radio Aahs Online in which kids can send in jokes, make visits to other kids around the world, and print out puzzles and coloring pages. Also at this site is the electronic version of Sports Illustrated for Kids. Also courtesy of Time Warner, visit the ancient Roman Empire at <http://pathfinder.com/twep/rome> and solve a mystery by wandering the virtual streets as you search for scrolls and find clues to the impending collapse of the empire.

OUT OF THE EMAIL BAG

Gregory Giagnocavo Wentworth Worldwide Media, Inc. — <mailto:jgg@wentworth.com> — announces the release of the *Educator's World Wide Web Tourguide*, a helpful tour of over 200 educational treasures on the Web. Covered are eleven subject areas, curriculum integration ideas and pointers

to related Internet resources. A Mac/Windows CD is included with the book which lists at \$39.95. Wentworth's *Educator's Internet Companion*, released earlier this year, was favorably reviewed in September's Education Link.

Staci Logan — <mailto:slogan@iastate.edu> — is looking for first-person accounts and academic studies of home schooling and the socialization of home-schooled students.

Randy Town — <mailto:randyt@desiny.esd105.wednet.edu> — teaches an introductory psychology course and is looking for appropriate and ethical ideas for quick and easy experiments that can be used with students in a classroom setting. He wishes to demonstrate classical, operant and instrumental conditioning with these demonstrations.

Kayt Sunwood — <mailto:ksunwood@iastate.edu> — recommends The Instant Access Treasure Chest at <http://128.172.170.24/1d/1d.html> which offers a wealth of information and ideas about how to help students with reading and learning disabilities, dyslexia, and learning styles.

Melanie Goldman offers the "America Goes Back to School" page — <http://copernicus.bbn.com/testbed2/bts/bts.html> — which supports an initiative by the federal Department of Education. Projects, student work, community/student engagement, and professional development are available at this location from the National School Network Testbed members and schools.

Tom Jagninski — <mailto:tj@world.std.com> — is looking for English teachers who use contemporary literature and bestsellers in their classroom. Tom edits *Fiction Digest* and needs to enlist educators for a project that requires the use of the digest in the classroom and then reviews written by students and delivered to him by e-mail. Grants are available for those who wish to work with him in encouraging students to read for enjoyment and discussion. ♦

sites and resources

For womens' issues and resources, check the following:

inforM's Women's Studies Database:

<http://www.inform.umd.edu/EdRes/Topic/WomensStudies/>

Women's Health Hot Line Home Page:

<http://www.soft-design.com/softinfo/womens-health.html>

Interactive Publishing Alert:

<http://www.netcreations.com/ipa/>

U.S Congress' Thomas Web:

<http://thomas.loc.gov/>

Georgia Tech WWW User Survey data:

http://www.cc.gatech.edu/gvu/user_surveys/

CapWeb, the guide to the U.S. Congress:

<http://policy.net/capweb>

Carnegie Mellon University:

<http://english-www.hss.cmu.edu/Feminism.html>

University of Maryland

<http://www.inform.umd.edu:8080/EdRes/Topic/WomensStudies/>

WomensNet

<http://www.igc.apc.org/womensnet/>

Voices of Women World

<http://www.voiceofwomen.com>

For linked pages and discussion groups by and for women, check the following:

Amy Goodloe

<http://www.best.com/~agoodloe/>

Aliza Sherman

<http://www.cybergrrl.com/>

Systemers, an organization for women in computer fields:

<mailto:systemers-admin@systemers.org> with the word **subscribe** in the subject line.



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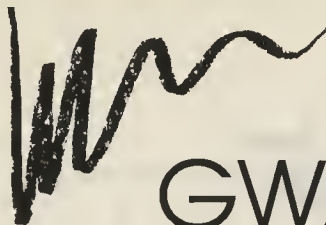
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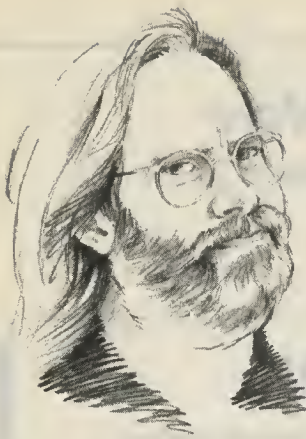
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BEGINNER'S LUCK

by Doug Shaker

MOTHRA IS DEAD! LONG LIVE THE NEW MOTHRA!

In this column, I describe, for your edification and amusement, my experiences as a bozo trying to get a reasonable BBS going. Most months, I try something new with Mothra, my BBS, and give you a chance to see what kind of disasters I can make for myself. Some months, however, the BBS itself takes control and thrusts a disaster on me. Last month's column was one of those.

I had a series of disk problems that eventually led me to conclude that both of my hard disks were dead — magnetic carrion. But I suspected that more than ordinary disk death was happening. Hard disks typically have something like a 500,000 hour mean time between failures (MTBF). If you do the math, you will find that this is something like one failure every 50 or 60 years. If you want to do some more math — trust me on this — you will find that there is only about a one in a thousand chance that both of my disks would croak within two weeks of each other. Therefore, I suspected that either the controller or the cable had crapped out as well and I replaced both of them.

Happy that I had solved my hardware problem, I planned on restoring the BBS files from backup and continuing. No such luck, Charlie. When I went to do the restore, I found that I had not done my backup properly and my backup tapes were nearly useless. I lost my forums, my mail and some of my disk libraries. I had hoped that the universe had done enough to my BBS and that this would be the end of my misfortunes with it. I certainly thought it was enough. I had learned my backup lesson — again — well and truly. I was repentant and ready to go on. However, fate was not done with me and I had more "growth experiences" (California-speak for f***ing disasters) yet to complete.

I formatted the disk, installed DOS, TSX-32 (the operating system for my BBS) and the BBS software, TSX-BBS. Then I restored as much of the BBS data as I could. The BBS started operation, but I started getting nasty disk errors. The system was somehow screwing up the names of the files. The first night, during nightly forum maintenance, I got an error message: **File Close Comparison Error: expected TMP00021\$\$\$, got M**. Since this operating system gives its temporary files names like TMP00021. \$\$\$ I took this message to mean that the OS had gone to close the file and, upon attempting to do so, found that the file name had changed to something other than what it had expected. After my disk problems, I couldn't help feeling a touch hostile. This screwed up file system isn't exactly what I expected either, ya stinkin' computer. Eat bad power, resistor breath!

I booted to DOS and ran DOS's disk repair utility, **scandisk**. It found a dozen or so other file errors, mostly in my forum files. I called S&H, the suppliers of TSX. They suggested that I turn off all ROM shadowing options listed in the CMOS of my BBS system. Apparently ROM shadowing is a known way of screwing up some disk controllers. This may be true, but ROM shadowing is also a known way of avoiding the glacial slowness of the memory in ROM chips. If you ever want to see a system boot really slowly, turn off all the ROM shadowing in your BIOS.

So, the support guy and I dinked around with the ROM shadowing options for a while. No luck. All I needed to do was boot to TSX, start any job that involved disk activity and a few minutes later, my disk was corrupted. Could it be that the forum maintenance program had a bug in it? Most of the corrupted files were forum-related. I turned off forum maintenance. Nope, corruption kept occurring. Could it be the Internet connection? I turned it off. Nope, corruption kept occurring. After several hours of this kind of diagnostic work, it became apparent that Mothra was a danger to itself and I couldn't leave it on if I wasn't doing diagnosis on it. I shut it down and told the TSX support guy I would call the next day.

The next day, my problem and I were passed to the software development staff. The guy that ended up with my problem was very friendly and methodical. He suggested that I get the latest version of the OS as there had been a disk-related bug fix recently. I downloaded a new OS kernel and brought the new OS version up. The disk immediately started to churn. Crap! What's it doing? I brought it down as fast as I could and booted to DOS. I ran **scandisk** on it and found that in the two minutes the system was up, it had destroyed four files.

Throughout the day, the developer and I went over a few other possibilities. We excluded TSX from some regions of memory. We adjusted buffers. We adjusted the CMOS on the disk controller to exclude all options that could be excluded. Nope, nope, nope. Every time we booted to TSX, I would get disk activity and, in short order, the disk would be corrupted. We were puzzled.

I was starting to get worried. My BBS/mail-server/web-server had been dead for a week or so now. I was losing mail and since I run a mail-order business where much of my business comes in the e-mail, I was losing money.

Nevertheless, my developer was two time zones to the East of me and it was the end of his day. He sug-

Doug Shaker runs a one-person mail-order business supplying Smalltalk software to Smalltalk developers. He started his BBS in early 1995 as an adjunct to his business. He wishes he knew what he was doing, but he sees no chance of that happening anytime soon. You can send Doug e-mail at doug@smalltalk.com or you can connect to his BBS at (415)854-5581. You may also telnet to his BBS at [bbs.smalltalk.com](telnet://bbs.smalltalk.com). Doug has five modems, four computers, three phones, two children and one wife. They keep him busy.

gested that I might have a bad memory chip. He signed off.

I used my other PC to get onto Compuserve and download some memory diagnostics. I booted my BBS system to DOS and ran memory diagnostics all night. No errors found.

The next day, the developer and I worked on the hardware error idea some more. We removed my multiple-port serial board from the system. Nope, five minutes under TSX gave me more disk corruption. Hours under DOS gave me no disk problems at all. I got some heavier duty memory diagnostics and ran them for a few hours. No errors found and I called it quits for another day.

By now, I was getting weary. I had spent the majority of my time on this problem for three days. I had spent the previous ten days diagnosing my hard disk failures and replacing the disks. My system had been down for almost two weeks. I had work to do, a family to talk to, a life to lead. Why did I ever start this BBS in the first place? I wanted to work on some other problem or, failing that, I at least wanted to be making some progress. The next day I did nothing with my system but grimace at it when it wasn't looking. When the TSX developer called, I said I didn't have time to try anything that day.

I picked up a copy of *Boardwatch* and looked at Drew Selman's column on Linux. Hmmm. When I was picking BBS software, my main problem with Linux-based software was that none of it supported QWK. QWK is a BBS protocol designed to minimize connect time. If you have a QWK reader and a connect to a QWK-capable BBS, you can download e-mail and forum messages at top modem speed, disconnect, respond off-line, and then reconnect later to upload your responses.

I wanted QWK in my BBS because I imagined that some large portion of my users would be people who had no Internet access. I imagined that they would use my BBS to get access to various Smalltalk-related FTP libraries.

However, only one or two of my users had ever used QWK. And I never filled my file libraries with any useful portion of the Smalltalk FTP libraries. In actual fact, more than half of my users log on over telnet ports from the Internet. QWK was not really an important factor anymore, at least for my users.

So why not Linux? I called several suppliers of Linux CDROMs and asked about price.

The next day, I called my friend in the TSX development department. We tried disabling cache, both on the motherboard and in the 486. ROM shadowing was still off. The combination was obnoxiously slow. I could press the reset button, get a cup of coffee, put in the cream, stir it and walk back to my machine and it would still be booting.

But when we left the BBS in TSX for five minutes I seemed to get no disk errors. Hallelujah! Could that be it? I could live with long boot times! I let the TSX developer go, rebooted to TSX and let it sit for half an hour. I booted to DOS and — crap! — there were more disk errors. It was still making errors with the caching and shadowing turned off, it was just making them very slowly — like it did everything else.

I got morose. Why was I doing a BBS anyway? It wasn't making me any money — it was costing me money and time and energy. I should dump it and give myself some free time. I could go back to having a life.

But the BBS seemed to help out some of the folks it was intended to help. Some of the files that I had available were pretty popular. And my collection of Smalltalk jobs listings had helped a few people get jobs. OK, so I won't close it down. But what was I going to do about getting it up and running?

The guys at S&H seemed pretty sure I had a hardware problem. They were very helpful — they had made repeated offers to continue to work on the problem until I had it working. They were easy to reach and willing to put in long phone calls to work on the problem. You can't ask for much more from a software supplier.

Except I didn't think it really was a hardware problem. I thought it was a pointer error that caused the disk cache to get overwritten with some event logs that TSX keeps in memory. Still, it had been working perfectly for months before I upgraded the OS version and, nearly simultaneously, had my disks die and be replaced.

But none of the other TSX customers had my problem. Maybe it *was* a hardware problem. But it didn't show up under DOS. It's got to be soft-

ware. No, wait, if it was software you would expect...

At this point, we have to consider the question of what does it mean to call something a hardware problem. When you call something a hardware problem, you are saying that the hardware is not doing something it is supposed to do (or doing something it is *not* supposed to do). But how do you determine what it is supposed to do? There are plenty of obvious cases — video cards should generate a video signal, keyboards should generate keyboard presses and serial cards should do serial I/O. But there are also plenty of cases at the margin, cases where it is not exactly clear what the PC should be doing.

When I was trying to debug my disk problems, I talked to one supplier who said that the SCSI disk signal "Unit Attention" meant that the disk needed attention. When their disk driver got that signal, it paused the system until the operator could note the exception. Another supplier claimed that the same signal meant that the disk unit was *at* attention, ready for action. Who is right? I am sure that the SCSI interface is well enough defined that somewhere, someone has the answer. But I certainly don't know the answer and I am not going to buy a copy of the SCSI interface standard just so I can wait on hold for an hour and then say "I told you so."

At some level, the problem is really that the reference platform for the PC of today is no longer manufactured. The reference platform for today's PCs is the IBM PC-AT, a 286 computer that has been dead as a doornail for half a decade. What does it mean to have a faulty link between a Pentium chip and static ROM cache if your reference platform is a discontinued 286 with no cache? If no one owns the standard and keeps it up to date, some problems may not be easily defined as hardware or software, even if you know exactly what the problem is. Weird, eh?

Taking another perspective, think about OS/2. IBM is a very large corporation — they aren't called Big Blue for nothing. IBM has tried very hard to make OS/2 Warp an OS that can run on nearly any DOS platform from a 386 up. But there have been problems. Anyone who reads this magazine knows that Jack Rickard couldn't get it to install on his machine. And nearly every issue of *Boardwatch* for the last 200 years has at least one letter to Jack saying "Well, OS/2 didn't install on my

machine, either" and another saying "It installed on mine just fine." The OS for my BBS was written and is supported by a team of five or six guys. Even with my problems, I think, S&H got closer to universal DOS compatibility with TSX than IBM did with OS/2.

What it all boils down to is that I couldn't tell if my problem was a hardware or a software problem and I don't know if there is a way of telling. The only way of avoiding this problem would be to use the reference software platform, DOS, and I hate DOS. I won't do it.

But my system still wasn't working. Since it was my main mail machine and USENET news machine, I felt like I was losing business every day I wasn't connected to the net.

I had two options. I could keep on trying to debug it with S&H or I could break out of this mess and install Linux on it. I took out Drew Selman's Linux column and looked at the suppliers listed. One, Yggdrasil Computing, was pretty close and seemed to have a good Linux CD. I ordered one over the phone and it arrived on Friday. Saturday morning, I booted to DOS, backed up the disk to floppy, and started installing Linux. A rash move, but not one that I regret yet. ♦

resources:

The TSX-32 OS and the TSX-BBS are sold by S&H Systems of Nashville, Tennessee. Their voice number is (615)327-3670; <mailto:sales@sandh.com>; a demo system can be downloaded from <ftp://ftp.sandh.com>. They have some of the best software support I have ever experienced but their software and my PC don't like each other anymore. I don't know why.

Linux is a very good UNIX clone for 386 (or better) PCs. I bought my copy from Yggdrasil Computing in San Jose, California. They have a Linux CDROM set that costs about \$40. Call them at (408)261-6630; <mailto:info@yggdrasil.com>. Be sure and get *The Linux Bible* at the same time. It's just a nicely printed series of help files for Linux that you could download and print yourself. But they did it a whole lot nicer and maybe cheaper — 1596 pages plus a CDROM for another \$40.

Linux and the help files are also available at no cost from a number of FTP sites, including <ftp://ftp.sunsite.unc.edu>. I like it because I like UNIX. If you have UNIX experience, Linux is like a breath of fresh air. It is free, it works, and it connects to the Internet in an absolutely reliable way. But if you don't have UNIX experience, it is a miserably complex OS that will take you a long time to learn. For example, the installation instructions are likely to assume that you know what the system file */etc/fstab* is for and the format in which its entries are recorded.

If you would like to learn UNIX well enough to use Linux, you will need to learn the craft of UNIX system administration. The books I use to help me with this are *The Linux Bible* (mentioned above), *UNIX System Administration Handbook* by Nemeth, Snyder, Seebass & Hein (Prentice-Hall, ISBN 0-13-151051-7, \$52) and *Essential System Administration* by Eelen Frisch (O'Reilly & Associates, ISBN 1-56592-127-5, \$32.95). The latter two are available from Computer Literacy Bookshops, (408)435-0744 or <mailto:info@clbooks.com>. ♦



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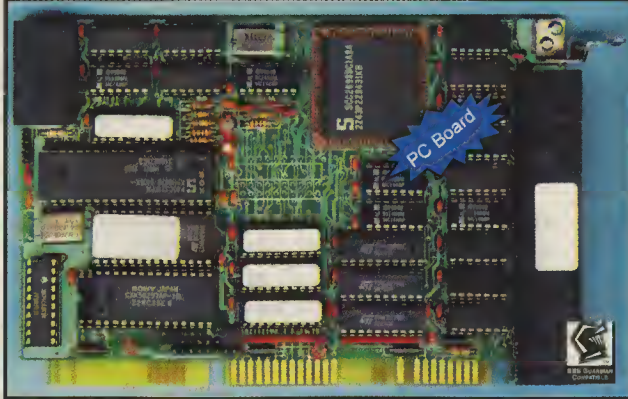
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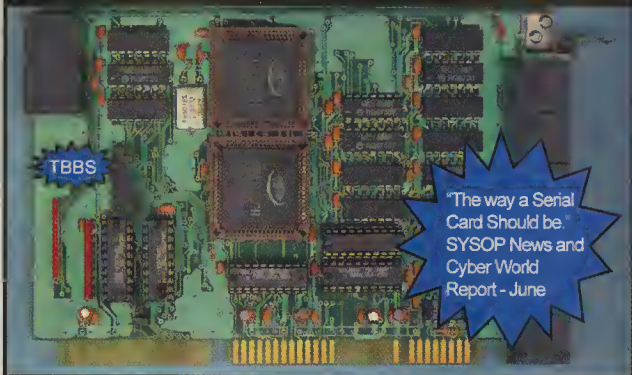
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- Guardian Watchdog protects against "lockups"

BBS 550



- 4 Channels with 16C550 UARTS
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- 10 conductor full handshaking support
- Compatible with all popular BBS software



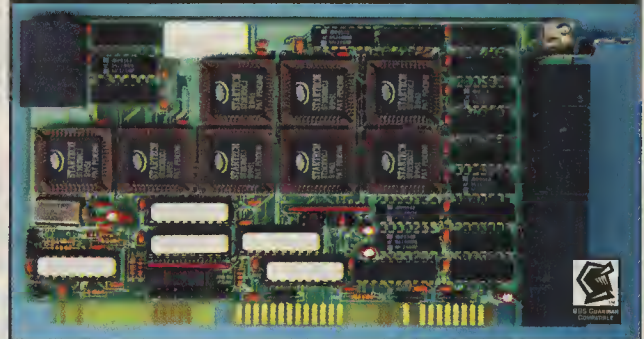
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MACINTOSH NEWS

by Bill Gram-Reefer

SEASONED GREETINGS

With the holiday season finally upon us, it's time to focus on those special gifts to give to neophyte net surfers in the family. We aren't talking PowerPC PowerBooks that explode on contact. What we have in mind is something a tad less expensive and doesn't require an insurance rider for the house.

InterCon's **NetShark** combines a World-Wide-Web browser and e-mail client that lets you switch easily between applications. NetShark lets you view Web documents created in HTML 2.0 or 3.0. Inline images are supported, as are web printing, forms, wallpaper, centered formats, as well as a variety of file formats including JPEG, GIF, QuickTime, XBM, AIFF, and .AU files.

NetShark is based on InterCon's Fully Asynchronous Scanning Technology (FAST, but of course). InterCon claims FAST lets you view images and content as fast as you can download the data from the host. For instance, with NetShark you can begin playing a standard .AU or AIFF audio file as it is being downloaded; which is the kind of tool one really needs when they check out The Capt. James T. Kirk Sing-along Page at <http://www.ama.caltech.edu/~mrm/kirk.html>. (You really haven't lived until you've heard Bill Shatner cover the standards.)

NetShark provides for archiving of URLs and supplies plenty of buttons to click on to navigate Home, Forward, Reload plus hotspots of the InterBahn. Of course, you can FTP, Gopher and access Telnet servers as well.

The built-in e-mail portion of NetShark offers some advanced features like being able to send or read messages with enhanced text files and images. You can change font styles, be bold, underline or add italics to drive your point home emphatically. You can also attach files, and support for in-line readers (no helper applications are needed) lets you view PICT, TIFF, GIF, QuickTime and sound files so you can see or hear the attached graphics or sounds in the window.

NetShark e-mail lets you manage multiple mailboxes, drag and drop addresses into the Send dialogue,

or even just type in the first few letters of a commonly used address and the rest will fill in — kind of like Eudora's "Nicknames," only crunchy. You can also sort incoming mail into folders by keyword, sender or other criteria, as well as highlight messages or refile them, copy to another mailbox, or automatically mark them as having been read.



You can get a free copy of NetShark Lite from InterCon's Web site at <http://netshark.inter.net>. But you will need a Mac, System 7, at least five honking MBs of disk space and 8 MBs of RAM, plus your own (or a friend's) modem and Internet connection or Santa will pay dearly. InterCon Systems Corporation,

950 Herndon Parkway, Herndon, VA 22070; <mailto:info@intercon.com>; (703) 709-5500 voice.



NETSHARK

*NetShark
Internet Suite*

The thing I never understood about holiday gift-giving is that I would always have to get a gift for my older brother knowing full well he would still beat on me. The computer industry is the same way where Company A buys Company B with the understanding that Company B should continue to try and knock the daylights out of Company A, even though it's all in the family. Case in point. Software Ventures, famous makers of the venerable telcom package **MicroPhone**, was purchased recently by none other than PSI (owners of InterCon...see above). However Software Ventures has its own telcom suite called **Internet Valet** (Valet). Yet NetShark and Valet compete happily in the same market. This is called market segmentation and competition. This is why General Motors has multiple divisions all competing with each other, for example.



Similar to NetShark, Valet is interesting because it provides a bundled collection of freeware Internet applications and integrates them with a tool bar that you click on to jump from application to application. What you get for \$49.95 is **Enhanced Mosaic** for

Bill Gram-Reefer, based in Concord, CA, is president of WORLDVIEW, specializing in connectivity and communications. His Online Services column appears monthly in **MicroTimes**. His amateurish web page can be accessed at <http://worldview-bbs.com>. E-mail Bill at reefer@worldview-bbs.com

Web surfing, free-ware **Eudora** for mail, **NewsWatcher** for newsgroup, **Fetch** for FTP, **TurboGopher**, **MicroPhone Telnet Tool**, plus **MacTCP** and **MacPPP**. You also get a free 14-day Internet account with PSI, a QuickTour guide and Easy Reference book and free technical support from those crack Software Venture dudes.

Newbies will love the ease of use, simple installation, and handy IP access. And if you have any qualms about forking over \$50 for what appears to be an all-star collection of Macintosh shareware, think again. This package has a ton of value. First, you get the tech support, which will keep the newbies from tearing out the rest of their hair after learning that their insurance rider on the PowerBook was not in effect. Secondly, the Tool Bar is a great value add by Software Ventures that ties it all together. Finally, your gift will help Junior get up to speed quickly, not having to search around or ask questions in the newsgroup like, "DUH, why do I need Gopher and Archie?" (Not so dumb, really.) Software Ventures Corporation, 2907 Claremont Avenue, Berkeley, CA 94705; (510) 644-3232 voice; (510) 848-0885 fax; <mailto:valet-info@svcdudes.com> or <http://www.svcdudes.com>

But whichever of the above you decide to give this year, your net newbie and PSI will thank you. But as easy as these programs are to use, also consider giving the gift that keeps on giving, **The Internet Starter Kit for Macintosh, 3.0** (KIT). This book, published by Hayden Books and authored by Adam Engst, the publisher of **TidBITS**, is the best Internet book for the Mac. This is the second year in a row that I've recommended KIT, which is worth at least five times its \$35 retail cost at most bookstores and well-stocked computer stores like Fry's Electronics. It's like the mother of all Chilton books for cars only for fixing your Mac to run on the Internet smoothly. You don't need anything else.

Updated and revised, the 700+ pages include a diskette of all the software you need plus deals on 50 regional, national and international Internet service providers and links to a special FTP site containing over 50MBs of tools and information for making your journey on the net safe and productive. New on the disk included with version 3.0 is Internet Config and a ton of BookMarks pointing to NewsWatcher, Netscape and other programs every Macintosh user should have on disk. There are cus-

tomized MacTCP prep files for each of the service providers offering special discounts — this alone is worth several hours of your time — so you can select the pre-configured TCP setup file instead of reading Chapter 16. Also new to Kit is an expanded chapter on authoring Web pages. While not offering as much breadth as some of the fine books available devoted to Web authoring, this chapter will get you started and publishing just as well.

But the best part of KIT 3.0 is Chapter 29, which offers Step by Step instructions for setting up and actually using (imagine that) the key programs that come on the disk to help you get fired up. Get it. Give it. Use it. **Internet Starter Kit for Macintosh, Third Edition**, by Adam Engst (<mailto:ace@tidbits.com>), published by Hayden Books, 201 W. 103rd Street, Indianapolis, IN 46290; 95-60415 (Library of Congress Catalog Number); 1-56830-197-9 (ISBN); (800) 428-5331 voice; (800) 448-3804 fax; <mailto:bradm@hayden.com> (Internet); Hayden Books (America Online); hayden.books (AppleLink); 76350, 3014 (CompuServe).

CAMPAIGN '96 UPDATE



Guy Kawasaki for President

This just in. A freak occurrence of computer hacking has confounded pollsters and would-be presidential candidates alike. Reports are spotty, but it appears that the "Draft Guy Kawasaki for President" movement got a stunning shot in the arm when two unidentified hackers were able to crack the security of two November national straw polls. The computerized results from the nationwide, non-binding presidential preference vote taken in many major U.S. cities during November's elections and a national Macintosh User Group

poll for "Mac Man of the Year" were hopelessly jumbled by the hackers.

The combined rankings from the jumbled vote tallies revealed startling results. Jesse Jackson, who had hoped to score major points with inner-city voters, only narrowly finished in first place with 22%, while Apple Fellow Guy Kawasaki scored a strong second place showing with 21% of total votes cast. The rest of the field dropped significantly with Colin Powell garnering 13%, Dole at 12%, Clinton with 10%, and 6% for Alan Keyes. Rounding out the crowded field were, Gramm, Buchanan, and Alexander each gripping 5% tallies, while somebody named Maury from Scarborough Ontario (Canada) copped 1% of the vote on the strength of a well-organized write-in campaign.

David Broder, columnist for the **Washington Post**, was rumored to have muttered, "This just goes to show what happens when you let the masses-who-are asses have their say instead of relying on beltway pundits." A spokesman for a conservative think tank exclaimed, "Talk about having your thumb on the pulse of the American electorate. The combined results from these two diverse segments of the American public signify an interesting convergence."

When asked about his surprise showing, Kawasaki, on tour promoting his new book, **My Way or No Way on I-Way**, only smiled, shook his head, winked and said, "Like I say in my book, 'you gotta break the rules!'" This, after Kawasaki's main California rival, Governor Pete ("I won't run for President") Wilson's campaign slipped into bobble-headed insignificance. ♦

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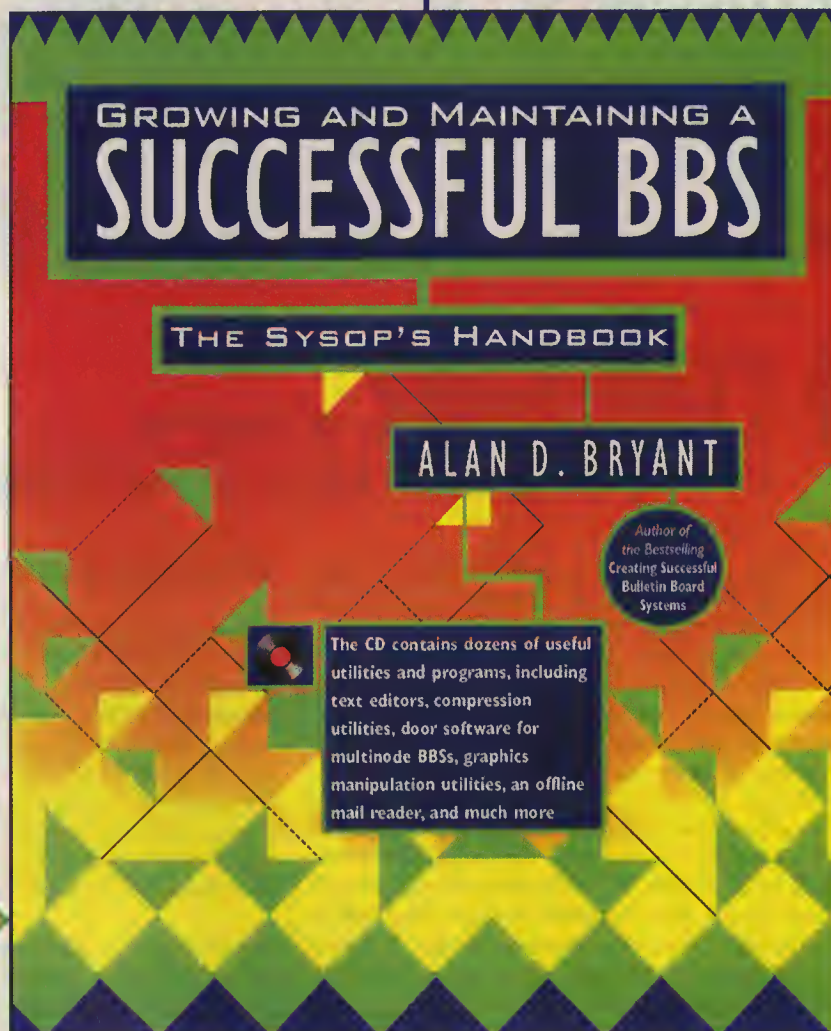


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Wallace Wang is the author of *CompuServe For Dummies*, *Procomm Plus for Dummies* and *Visual Basic for Dummies* (all published by IDG Books) as well as *Surfing The Microsoft Network*, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672 @compuserve.com or bothekat@aol.com or bo_the_cat@msn.com

COMPUSErVE

by Wallace Wang

COMPUSErVE (FINALLY) EMBRACES THE INTERNET

The folks at CompuServe know that thousands of people will never sign up for the service, no matter how attractive CompuServe makes its forums, services, and communications software, and no matter what incentives they may offer (such as cramming floppy disks in every magazine and annoying nearly everyone). Rather than hope that people will sign up to CompuServe, CompuServe has decided to offer direct access to the Internet as well. Through CompuServe's global network, Internet access will be available in more than 96 percent of the United States and overseas in cities including Brussels, Tokyo, Paris, Copenhagen, Berlin, Bogota, Moscow, and other places that most American high school students can never identify on a map.

Code-named **SPRYTE**, this new service will provide direct Internet access using one of three pricing plans. For **\$4.95** a month you can get three hours of access; for **\$9.95** a month you can get seven hours of access; and for **\$19.95** a month you can get twenty hours of access. In case you exceed your monthly time allotment, CompuServe will charge you **\$1.95** for each additional hour.

Besides giving you an e-mail address, **SPRYTE** also lets you create a personal web page. So the next time you're at a fashionable Hollywood, New York, or Paris cocktail party and want to impress a potential business contact (or date), you can pass out your business number, beeper, mobile phone, fax, e-mail address, or web page URL so they'll have no excuse for not making contact at a later date (unless the other person doesn't want to talk to you again).

SAFE SURFING FOR KIDS

In case you're one of those parents who don't want your kids to fall behind in the mythical dilemma of "Computer illiteracy," CompuServe is now offering *Internet In A Box For Kids*, which is a special version of the software suite that includes the **SPRY** Mosaic web browser, **SPRY** Mail, low-cost Internet access via CompuServe's international network, an instructional video explaining how the Internet works, a free subscription to a children's Web community called *FreeZone*, and a custom version of *SurfWatch*.

SurfWatch is a program that allows parents to block access to inappropriate material on the Internet, which effectively means that most adults won't have the slightest clue how to use it but their kids will probably find ways to defeat it without their parents' knowledge. The Windows version of *Internet In A Box for Kids* will retail for **\$49.95** with a Macintosh version promised within a few months.

TALKING IT OVER: FIRST LADY'S COLUMN

Hillary Clinton, The First Lady (at least until the next Presidential election), now has her own syndicated column, *"Talking it Over,"* on CompuServe. Since many people find Hillary Clinton more popular than her husband, it's only natural that the general public would find her views on life more entertaining and informative than any formal speech concocted by the President.

"Talking It Over" contains Hillary's opinions on a variety of topics including women's rights, health care, and family vacations. Unfortunately, "Talking It Over" won't print Hillary's opinions of hard-nosed

politicians who are nearly as useless as Mount Rushmore (North Carolinian Senator Jesse Helms comes to mind), loud-mouth talk show hosts (such as Rush Limbaugh), or air-headed bimbos whose only claim to fame is sleeping with someone famous (such as Gennifer Flowers).

To read "Talking it Over," use the magic **GO COLUMNS** command, choose "Opinion/Commentary," and then select "Hillary Rodham-Clinton" to see what Hillary has to say today that the majority of Congress will ignore anyway.



CYBERBEACH ON THE BAYWATCH FORUM

In case you haven't gotten enough of seeing Pamela Lee (formerly Pamela Anderson) running around in a bathing suit by watching *Baywatch* on TV, now you can satisfy your infatuation by visiting the new Baywatch Forum (**GO BAYWATCH**) on CompuServe as well. The Baywatch Forum contains the latest behind-the-scenes news, digitized photos, sounds, and QuickTime videos of the beautiful men and women of "Baywatch," who would normally be serving fries in Los Angeles fast food restaurants if they hadn't landed a role on a hit TV show.

Those who just can't get enough of Baywatch can swap messages with other CompuServe members and discuss the latest storylines (in case you haven't noticed that there's more to Baywatch than bathing suits), share thoughts about whether or not they like the newest cast members, and discuss the all-important question on whether Pamela Lee can have a successful career if she actually has to act for a change.

GETTING WELL NATURALLY

In today's world of modern medicine, the solution for any illness usually centers around prescribing more drugs just to see what might happen next, slicing open the affected area in case removing internal organs can cure the malady, or bom-

barding the body with regular doses of radiation on the off-chance that something as wildly expensive as chemotherapy can actually be justified by medical science.

But just in case you'd rather not become yet another human guinea pig for doctors to experiment on and then bill you for their failure, visit the Natural Medicine forum (**GO NATMED**) and look for your cure in a variety of alternative medical practices that includes acupuncture, chiropractors, and homeopathy.

The *Natural Medicine Forum* is headed by Skye Lininger, D.C. (Doctor of Chiropractic). Back in 1975, Skye was a clerk in a natural foods store, before moving to Portland to attend Western States Chiropractic College. While in school he began working with Nature's Life, a supplier of nutritional supplements. Approximately eight years ago, he began publishing a monthly newsletter called *HealthNotes* which is distributed by natural foods stores in all 50 states along with England and Canada.

In the late 80's, Skye served as a sysop for CompuServe's Desktop Publishing Forum. After a few years, he presented a business plan to CompuServe for the Holistic Health Forum, the original name for the Natural Medicine Forum. Skye quickly recruited friend and colleague Ed

Brown, D.C., who was both a computer expert and a sysop of his own natural health BBS. Ed agreed to shut down his BBS and move his many files over to the new CompuServe forum.

Skye stresses that the forum has always provided a place where those interested in natural medicine could discuss their experiences and ask questions about alternatives to standard conventional medicine. "According to a Harvard study," Skye says, "more than half the people in this country are interested in so-called 'alternative' medicine. The health care industry (and Medicare) is in a crisis of both finances and public confidence. Natural medicine provides a stark contrast because it is so cost-effective and people have confidence in a natural approach."

Since its introduction, the Natural Medicine Forum has hosted many famous medical doctors, naturopaths, chiropractors, and legislators including Senator Tom Harkin, the sponsor of the nutritional supplement bill in the last Congress, and Representative Peter deFazio who has authored a recently introduced Alternative Medicine Bill.

Currently, the Natural Medicine Forum boasts over 125,000 messages from over 45,000 members in less than two years, including information from knowledgeable laypeople and professionals. This knowledge base provides a fertile arena for discussion of natural medicine. Besides offering advice and information, many messages come from people all over the world who provide information about the politics of natural health alternatives in their own countries.



Skye is quick to point out that the greatest accomplishment of the forum has been developing an area that provides a “safe haven” for people to ask tough questions about health and investigate virtually any therapy or approach to health care.

“Previously, on CompuServe,” Skye says, “the areas devoted to health were very unfriendly to anyone who was interested in unconventional or natural medicine. On the Natural Medicine forum, we have provided a place where many ‘non-believers’ have come away with new ideas and have had to reevaluate their own belief structure.”

With flu season hitting most parts of the country, don’t drug yourself up on artificially colored medicine that makes you drowsy in the middle of the day. Check out the Natural Medicine forum for the latest information on nutrients, therapies, or diets that could cure whatever malady may be attacking your body right now. You just might find a natural cure for your illness, and save some money and your health in the process.

TAKE A TRIP ON THE WILD SIDE

The next time you want to travel overseas, forget about Club Med, Carnival Cruises, or other packaged tours that essentially transport you in a bubble of American culture no matter what part of the world you may be visiting.

For those who really want to experience an adventure, visit the United States Department of State’s Citizen Emergency Center (**GO STATE**) and find out which parts of the world are more dangerous than Los Angeles, Detroit, and Miami combined.

For those of you traveling to Vietnam, be warned that petty crime is a problem in Ho Chi Minh City. Petty theft, briefcase and purse snatching, and pocketpicking are common, particularly on the city’s main streets and around major hotels. Some pedicab drivers have reportedly kidnapped passengers and extorted money; it may be risky to hire pedicabs not associated with reputable hotels or other establishments such as restaurants.

The Department of State also warns all U.S. citizens against travel to Iran, which remains dangerous because of the generally anti-American atmosphere and Iranian government hostility to the U.S. government. U.S. citizens traveling to Iran have been detained without charge, arrested, and harassed by Iranian authorities. Former Muslims who have converted to other religions, as well as persons who encourage Muslims to convert, are subject to arrest and possible execution. (Now there’s a way to keep religious cultists from bothering travelers at airports.)

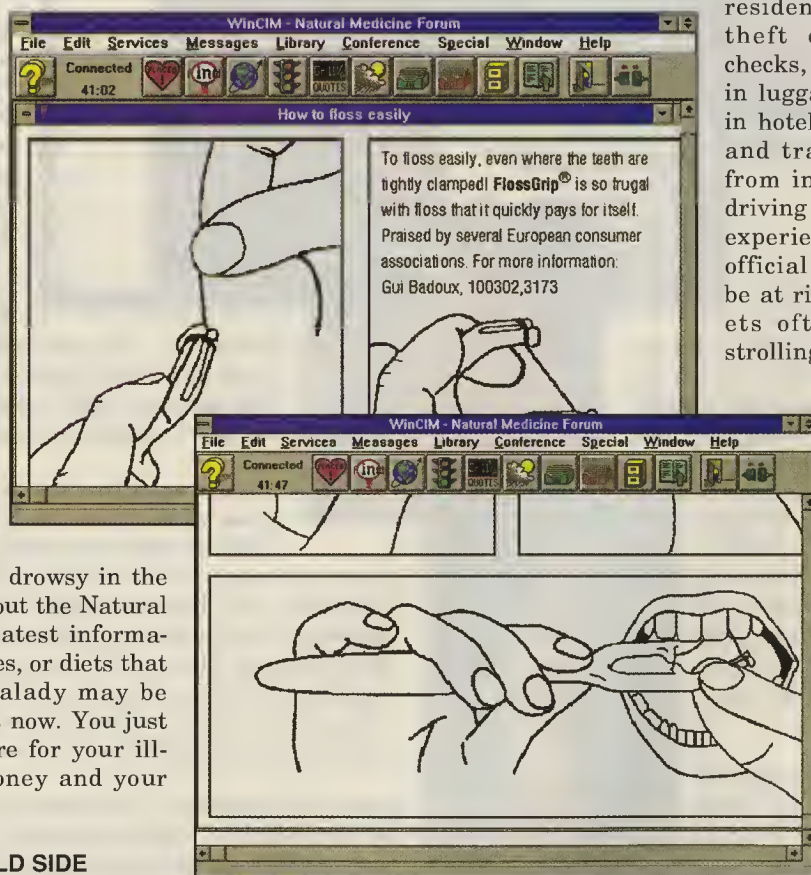
If Vietnam and Iran are off your agenda, try Tanzania, where crime is a concern in both urban and rural areas of Tanzania. Incidents include muggings, vehicle thefts and

residential break-ins along with theft of passports, travelers checks, cameras and jewelry if left in luggage at airline check-ins or in hotel lobbies. Thieves on buses and trains may steal valuables from inattentive riders. Visitors driving in game parks without an experienced driver or game park official accompanying them may be at risk. Muggers and pickpockets often prey on individuals strolling alone on beaches or other

isolated areas. Crime and hazardous road conditions make travel by night dangerous.

For those who still harbor delusions that the world is heading towards a utopian community of peace and prosperity, think again. America may seem like a violent landscape of gang warfare and drive-by shootings, but it’s nothing compared to the turmoil that the rest of the world lives with everyday. So the next time the news

makes you feel like America is going down the toilet, read a few of the Department of State’s travel advisory warnings and you’ll start to feel better already. ♦



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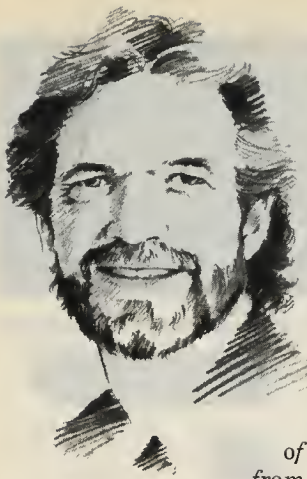
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PRODIGY

by Ric Manning

ROLL CALL ON PRODIGY'S COPS & CRIME BOARD

Ric Manning writes about business technology, computers and consumer electronics for *The Courier-Journal* in Louisville, Ky. His weekly column called *Home Tech* is distributed to more than 80 newspapers by the Gannett News Service and it's available on the World Wide Web <http://iglou.com/gizweb>

Ric was the founding editor of *Plumb* and *Bulletin Board Systems*, two newsletters that covered the BBS arena in the early 1980s. His freelance work has appeared in several magazines including *PC/Computing*, *Mobile Office*, *PC Week* and *Home Office Computing*. Ric lives in Southern Indiana with his wife, two children and a champion Weimaraner. Write to Ric at mailto:ricman@iglou.com

I was dispatched in reference to a young woman standing around at a gas station acting strange. She had the look of a transient, so I asked her where she was from. She just said "Do you see him?" I looked around but I didn't see anyone. I asked her who. She said, "My dead father." That got my attention.

I asked where he was. She said across the street, that he was watching us. There was nothing across the street except woods. Then she said that he had been following her. She also advised me that he had killed her on numerous occasions. She said that he had killed her just that morning. She told me that he had cut her into pieces and then sewed her back together.

I told her she looked remarkably well for going through such an ordeal. She said she heals quickly.

Welcome to Prodigy's **Cops & Crime Bulletin Board**, the kind of place where no tale is too tall and where Edgar Allen Poe and Joseph Wambaugh would feel right at home.

"People in law enforcement have a lot to say and they're in a business that is more interesting than many," said E. W. Count, the New York writer who manages the board.

Count has published one crime novel and a collection of stories told by New York City detectives. She says the board is a good place to get to know people from around the country who are involved in law enforcement and pick up a few good yarns in the process.

"This has given me a wonderful opportunity to talk to LEOs (law enforcement officers) outside New York City," she said. "I have a book proposal out now on a law enforcement topic that I couldn't have done without my contacts on the board."

The broad title of Cops & Crime takes in almost anyone who works in law enforcement or a related field or has an interest in police work. Topic areas cover corrections work, dispatchers, private investigators and emergency services. Firefighters, medical personnel and federal agents are also welcome. So are civilians, said Count, "as long as they don't come in with an attitude."

Discussion topics range from police procedures and practices (more than a few posters have sought advice on how to fight a speeding ticket) to the relative merits of various sidearms. But some of the most entertaining postings are war stories from working cops.

I had been hired by Radio Shack to take care of a few stores that were not showing any profits and had been assigned to a store in Beverly Hills ... since the Space Shuttle was circling the earth, I had the frequency programmed so people passing by could listen to the astronauts up in space.

Halfway into the day, a "gentleman" walked into the store. He was a little nervous as he looked about the store, and he carried a small duffel type bag. He approached the sales counter and asked where the stereo speakers were. I pointed to the back display and he thanked me, walked off, found a corner and started to move the speakers around him, like Indians circling a wagon train. I stood off to the side as I saw him open

his bag and take out a home made aluminum foil jacket, gloves, booties (trust me) and pyramid-shaped hat.

I waited for him to put on his "uniform" over his clothes and I walked over just to ask if there was anything else he needed. He said no thank you, and said to me, "I hope you don't mind me being here but since the Space Shuttle is up, they were given a list of people to

shoot Gamma rays at and as long as I wear these and have the electronics of the speakers around me, they can't find me."

I went to the back office and called the Beverly Hills PD ... When the handcuffs came out he started to be a bit strange and one of the BHPD said calmly, "I know you feel safe here but these are special cuffs. When we put these on you, it forms an extraordinary connection, like a closed circuit, and the Space Shuttle can never find you."

Well, our space cadet smiled, got excited and was anxious to have his magical bracelets put on him, and he walked out with no problems. The last thing I heard was one of the officers say "OK, which one of us will write this report?"



Catherine Martin became a regular on the Cops & Crime board after an auto accident forced her to retire from the Gwinnett County Police Department in suburban Atlanta. She uses the board to connect with other current and former law enforcement officers, but got more deeply involved when she created a special section for spouses.

"We talk about everything from 'my husband is cheating on me' to 'I didn't pass the promotion exam,'" Martin said. Many of the wives who log on are newcomers to law enforcement and they find it to be a difficult adjustment. "I had one call from a woman in Maine. She said 'He's two hours late and I'm scared to death.'"

She also hears horror stories from women who feel that their husband's jobs are hurting their marriage. "One woman wanted to talk about suicide rates and divorce. And a woman in Texas was bitter because eight of the ten officers in her husband's shift were divorced," Martin said. "She told me she got a call from a girlfriend who asked her if she knew her house was on the market? That was his way of telling her he wanted a divorce."

This fall the board was linked to one of Prodigy's new Interest Areas, a Web page with an extensive collection of links to law enforcement pages. The Web page, which is accessible only to Prodigy members, is billed as a "one-stop cop shop on the World Wide Web!"

The page includes a few crime-stopper links, including the FBI's Most Wanted list — <http://www.fbi.gov/toplist.htm> — and a few state and local pages that appeal for help in catching fugitives or solving crimes. Other links take you to pages run by police agencies, including Cop Net — <http://copnet.uwyo.edu> — a collection of Internet crime prevention projects and sites for ordering police-related merchandise.

A few police officers have used the Prodigy board for advice on solving a difficult crime, said Sgt. John Lopotosky, an officer with a Southern California Sheriff's department. But so far, the board hasn't turned into an online version of "America's Most Wanted."

But Lopotosky said the board has certainly helped him sharpen his skills and broaden his perspective. "I think it's made me a better cop because I'm more aware of what's out there," he

said. "Law enforcement is quickly moving into computers and for us old horses, if we don't become computer literate or computer aware, we're gonna get left behind."

I remember getting calls like that when I was a dispatcher in college. A man would call and say that the TV was sending vampires to get him and that he was running out of tin foil to put on the screen. I told him to turn the screen towards the wall so that they couldn't get out. He called back and said that it worked.

We also had an old lady that lived in the borough who would call about death rays. But instead of wrapping her in the foil, we had to put it on the windows. For some reason, I don't recall getting a class in the academy that taught about the protective value of Reynolds Wrap. ♦

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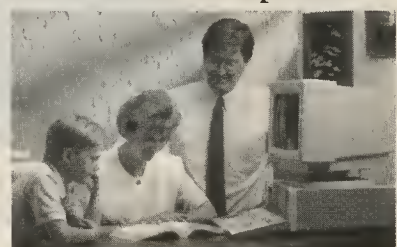
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MICROSOFT NETWORK NEWS

by Durant
Imboden

“When will the baby become a behemoth?” This is the question that seems to be on everyone’s mind as contract forum managers and independent content providers reflect on MSN’s membership statistics three months after

launch. Not long ago, an industry tabloid predicted 375,000 users on MSN by the end of 1995 and 10.2 million in 1999. It seems fairly certain that the lower figure has already been exceeded, even after adjusting for trial memberships. The baby has a long way to go before it can thumb its nose at CompuServe and AOL, but there’s little doubt that the online upstart from Redmond is gaining weight and making more noise with each passing week.

Durant Imboden is a freelance writer who manages the Writing forum in the Arts & Entertainment category of The Microsoft Network. His credentials include published novels, articles, and short stories; fiction editing and staff writing for *Playboy*; representing authors at a New York literary agency; and freelance copywriting for Lotus, Apple, Northwest Airlines, US West, and other national advertising accounts. When not typing, Durant is a volunteer announcer at local, state, and sectional figure-skating competitions. Mailto: Durant_Imboden_msn@msn.com on the Internet. The author is not an employee or spokesman for Microsoft.



**Nate Gehl,
Senior Sysop**

NATE GEHL, SENIOR SYSOP

Every baby needs a sitter now and then, and Nate Gehl — one of five U.S. senior sysops at The Microsoft Network — is well-equipped for the role.

Nate doesn’t run a forum on MSN. He doesn’t sell entertainment, services, or merchandise. Instead, he plays overseer and support maven to the contract sysops in The Microsoft Network’s

Internet Center, Computers & Software, and Business & Finance categories. And he does it all from his house in a Minneapolis-St. Paul suburb, where he also works as a self-employed communications and connectivity consultant.

The trail that led to Nate’s plum assignment with MSN began more than a decade ago in the Twin Cities BBS community. “I got involved in BBSs back in 1983 or ’84, when only about four boards existed in the metropolitan area,” he recalls. “As the number of BBSs grew, I was helping to run many of them from a support point of view. Sysops would e-mail me with questions about BBS software packages, and I’d provide technical help.

“Just like other people, I’d fade in and out of the BBS community as the years went by,” he adds. “The last time, several years ago, I became involved in a big

way. I accepted the job of technical sysop with the *BarDo Exchange*, one of the Minneapolis area’s largest BBSs. I maintained the hardware, set up new gear, evaluated software, got BarDo on FidoNet, and basically handled everything but member issues. This went on for 18 months, when I quit to concentrate on my work with MSN.”

Nate’s involvement with The Microsoft Network began innocently enough. In November of 1994, he became a Windows 95 beta tester and started playing with Microsoft’s newly conceived online service. “As MSN was built out, I realized this was something I wanted to be involved in. So I contacted Microsoft and applied for a forum manager’s job. They liked what they saw and talked to me about being a category manager, which was one step up the tree. As time went by and I spent a lot of time on MSN, the people responsible for contracting began to hear my name from every direction. Three months after my initial application, they offered me a job as senior sysop.”

Just what is a senior sysop? During the months that preceded and immediately followed The Microsoft Network’s launch, Nate’s job included a grab bag of responsibilities. “I spent a month as manager of the Internet Center, which is the focal point of MSN’s newsgroup and Web activities,” Nate explains. “Until recently, I also served as the postmaster, newsmaster, and webmaster of the MSN domain.”

According to Nate, the duties of a senior sysop are still evolving, but providing tech support is a major part of the job. “I spend several hours a day in a chat room where category managers, forum managers, and ICPs can ask for help with technical issues. I also get phone calls, mainly from category managers.”

Nate estimates that his job’s basic duties require about 20 hours a week, but he’s been averaging closer to 75 hours a week over the last few months. “This is obviously my own choice,” he says. “I’m not here just to collect a paycheck, but to make MSN work.”

As a former technical sysop in the BBS community, Nate is sensitive to the challenges faced by BBS operators as users increasingly turn toward commercial online services and the World Wide Web. “I can see opportunities for sysops to develop their own specialized areas on The Microsoft Network, using our dial-up capabilities to set up niche communities — or even local communities — within the MSN interface. If a BBS operator wants to become an independent content provider on MSN and do something like this, our sysop tools make implementation a lot easier than it would be on the other major online services.”

Nate Gehl's belief in the value of local online communities is reflected in his personal life. He met his fiancée on a Twin Cities BBS, and a wedding has been set for February. (The ceremony, however, will take place offline.)

SCREENWRITERS STUDIOS



The Screenwriters Studios logo is intended to create a "retro 1930s feel."



Adam Jacobs

Just as every Little Leaguer dreams of becoming the next Randy Johnson or Kirby Puckett, every adult with a word processor and a subscription to *Premiere* magazine longs to be a millionaire screenwriter in the tradition of William Goldman, Robert Towne, and Joe Eszterhas. Most of these would-be screenwriters are destined to give up before they start — but for those whose self-discipline matches their dreams, Screenwriters Studios is there to provide manuals, training, script protection, and support.

Screenwriters Studios is the brainchild of Adam Jacobs, an NYU Film School graduate who has Hollywood ambitions of his own. Adam wrote and sold a *Tales From the Dark Side* script after getting his film degree in the late 1980s, then landed a promotion job with Time-Warner's Paragon cable TV subsidiary in Manhattan. "During that time, my commercials were nominated for two Emmys and four ACE awards, but after eight years I decided that what I really wanted to do was write and direct movies. That's when I quit my job and moved to Southern California."

Soon, Adam had written a screenplay and decided to register it with the Writers Guild of America (West), or WGA, which offers a service designed to protect screenwriters from having their work stolen by unscrupulous producers. Registered scripts or synopses are filed in dated envelopes, to be retrieved and used as evidence if the author and a studio-lot scumbag face each other in court.

"I was frustrated that I had to mail my script in and wait weeks for a registration receipt, or drive into L.A. and stand in line to register it in person," Adam recalls. "And I didn't like the idea that I had to pay more than a WGA member for the same protection. So I invented a better mousetrap called the National Creative Registry."

Adam launched the National Creative Registry in September, 1994. "It offers the same protection as the Writers Guild service, but for less money and for a longer term. Best of all, it lets you register your script electronically by submitting a computer file instead of mailing or personally delivering a printed script."

The National Creative Registry processed more than 3,000 registrations in its first year through the Vine (an entertainment-industry BBS), Compu-Serve, and satellite e-mail addresses on AOL and Prodigy. About halfway through that first year, Adam Jacobs heard about The Microsoft Network, which was still in beta.

"I called Microsoft and talked to John Williams, who was in charge of recruiting independent content providers," Adam explains. "When I learned about Microsoft's goals for MSN, I decided to offer members not just the National Creative Registry, but an entire online world."

Adam's concept was for "a virtual studio where the writer is the most important person on the lot." Microsoft approved the proposal, and Adam's company — *In-Sync, Inc.* — began raising venture capital to finance its ambitious plans for Screenwriters Studios on MSN.

"Once we'd signed the deal, I got a beta copy

of Windows 95 and went headfirst into it, trying to learn as much as I could about the MSN interface," Adam says. "Microsoft's Interactive Conference in July was the real eye-opener for me and for my forum manager, Chris Boal. After we saw what Microsoft's online tools could do, we decided to put our money into a top-quality graphical interface."

Adam and his colleagues hired three outside firms: Centric, a developer of MediaView titles; Jeff Dillon of SummitSoft, for e-forms; and RunAmuck Graphics, a group of artists in Manhattan's "Silicon Alley" that created the logo, banners, and splash screen for Screenwriters Studios.

"We think anyone who's new to this area needs to put a tremendous amount of time into developing graphics," Adam says. "Great content is important, but the interface has to be fun. If there aren't a lot of things to click and play around with, the user gets bored very quickly."

The Screenwriters Studios interface begins with a splash screen: a painting of an imaginary studio. There are no text captions. Hidden MediaView "buttons" provide hot links to other studio areas when a user clicks on buildings in the studio lot. "We like interfaces where you have to look for things," says Adam. "Our splash screen is like Nintendo's original Mario Brothers game, since it has elements that users have to discover by exploring and playing."

Adam explains: "Click on the Production Services building, and you'll find two vendors — the National Creative Registry and the Insider System for Writers, a company that reads screenplays and describes them in a private newsletter that goes to more than 250 Hollywood agents. Click on the Studio Store, and you're taken to the Writers' Computer Store, a long-



established retailer of computers, software, and books for writers. The Writer's Aid Contest Book, a guide to screenwriting competitions, is also in the store. Creative Screenwriting magazine is in the Newsstand, and Writers Boot Camp — an online correspondence school for screenwriters — is under Screenwriting 101 in the Education Building."

In addition to this roster of "inaugural partners," Adam is talking to two major studios about sponsored chat auditoriums where writers of current movies would discuss their screenplays with MSN members. He's also working on a "query bank" where Hollywood agents can search for ideas by new screenwriters.

Adam is helped in his efforts by two more aspiring screenwriters: forum manager Chris Boal and Warren Levy, In-Sync's vice-president of marketing and advertising. Both staff members live and work in New York City, with Adam acting as the company's on-site mover and shaker in Southern California.

"We're first-timers at this," Adam concedes. "We've had to learn a massive amount in a short time. For example, we're already looking ahead to creating new interactive experiences with Blackbird, the Microsoft authoring system that will go online in early 1996. And we've been talking to our developers about chat-based games that writers can play when they feel like taking a break or have writer's block."

Adam feels that The Microsoft Network offers an excellent opportunity for small businesses that want to serve online communities rather than the anonymous masses on the World Wide Web. "I'm a great fan of what Microsoft does," he says, "and I'm confident that MSN will develop into the ultimate online experience."

When asked what advice he'd give to prospective MSN content providers, Adam has a few simple tips: "Come up with an original idea that you're confident you can execute well. Do a strong proposal to convince Microsoft that you can be successful. Make sure your online applications work before you make them public. Then hold your nose and jump!"

Adam concludes: "The wonderful thing about the online world, and MSN in particular, is that it's a level playing field where you can work with your customers to make your business the best it can be." ♦

New to MSN? Read this.

MSN is arranged in a directory tree, just like Windows 95. You can get a tree view of MSN from any folder (i.e., any directory level or window) by clicking the right mouse button on MSN's desktop icon and selecting "Explore." If you'd rather work in the default window view, simply follow the rule of "Drill down, back out." Enabling the Toolbar in the "View" menu will make this easier.

The Windows 95 "Find" command is available from any MSN folder or BBS menu. Enter the word "writing," and you'll get a list of every folder, BBS, chat, or other MSN

object that has "writing" as a keyword. Double-click any object on the list to reach your desired destination.

Once you've found a place you like, click the right mouse button. This lets you add the object to your "Favorite Places" folder or create a shortcut on your Windows 95 desktop.

"Go" words are also available, using the "Go to \ Other location" command on the "Edit" menu. Here's a list of "Go" words for forums and independent content providers that have been discussed here over the last few months:

Forum or ICP
Comedy Connection forum
Nursing Network forum
Inferno (firefighters)
Collectors Direct Network
Martial Arts Network
Alien Encounters & UFOs forum
Screenwriters Studios
Writing forum

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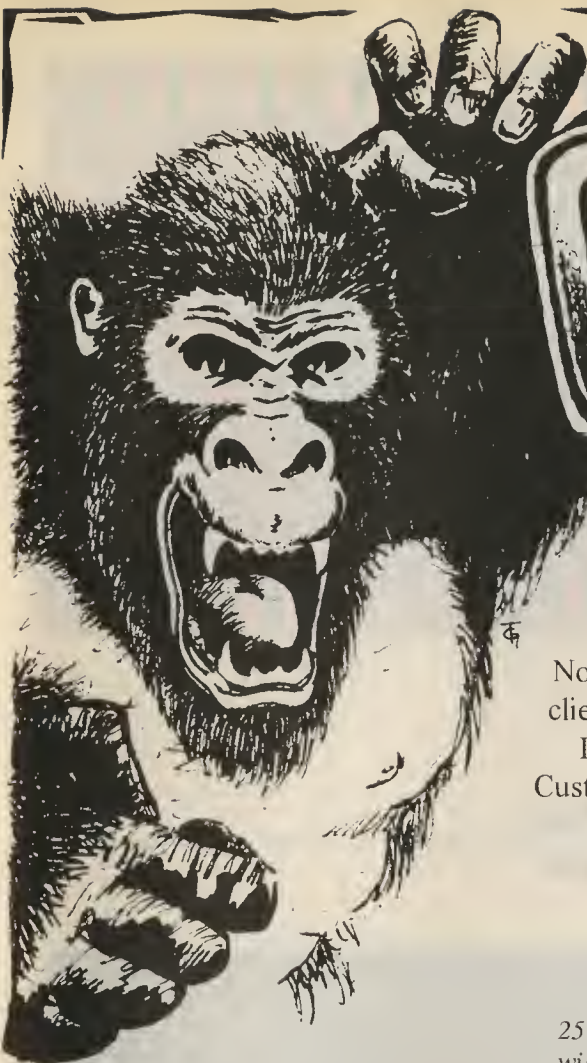
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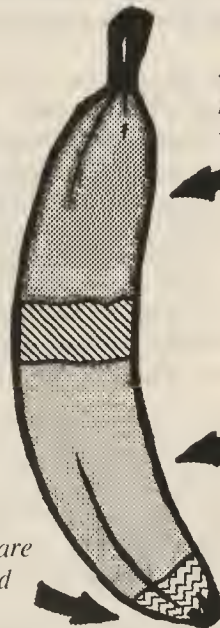
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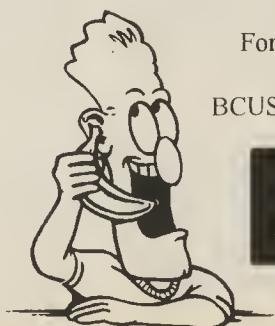


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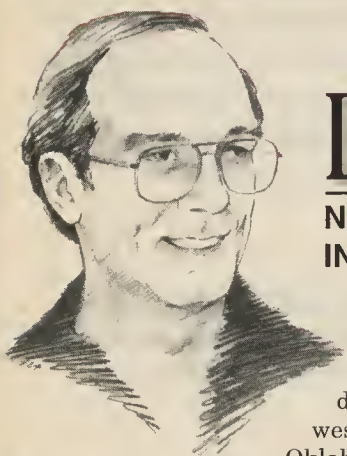
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DIRECT DIAL by David Hakala

NAUTILUS COMMERCIAL DATA SYSTEM: INTERNET FOR IOLA, KANSAS

David Hakala first appeared in *Boardwatch* in February, 1989. From May of 1991 until he assumed the position of Editor at Fault at *BW* in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book *Hot Links* with Mark Eppley, CEO of Traveling Software, and penned his own book, *Modems Made Easy*, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at mailto:david.hakala@boardwatch.com or at (303)973-6038.

Robin Boyer was born and raised in rural Iola, Kansas, in the open, rolling valley of the Neosho River. If that doesn't ring a bell, Iola is about 100 miles west of Wichita, 150 miles north of Tulsa, Oklahoma. Boyer has never been comfortable with big cities, big colleges ("I tried college, wasn't very good at it," he says) or so-called "real jobs." The only such job he's had involved designing microwave devices that "accidentally" jammed police radar. That ended when personal computers came along.

Boyer got his first PC — a Tandy TRS80 Model 1 — in 1978. He also bought a Hayes 300 baud modem, and after much searching found three other guys who could join him online in Iola. He started a BBS in 1982, running some now-forgotten software until he discovered eSoft's TBBS, which he's stuck with ever since.

Nautilus Commercial Data System — (316)365-7631 or <telnet://iolaks.com> — is Boyer's bid for the perfect lifestyle — "earning a big-city living in a cheap, high quality-of-life town." First he tried the file-library approach, adding gigabytes of shareware and dozens of phone lines. He even had a 200-line trunk laid to his house in anticipation of callers from all over the world. But it never happened.

Next, Boyer tried selling private BBS services to corporations in his region. For a monthly maintenance fee plus 10 cents per minute of connect time, national companies like Gates Rubber Co. used Nautilus for communication with field sales and service reps, suppliers and customers. But that market did not provide the income Boyer sought, either.



Rural ISP Robin Boyer and Family

He developed a truly valuable and innovative emergency weather data delivery service, which we reviewed in December, 1993. It provided accurate detailed weather maps with only a five-minute delay, compared to a 30-minute or longer delay using the National Weather Service's data feed. Emergency management agencies from Oklahoma to Nebraska and Kansas were impressed, but the service never did more than break even.

Finally, Boyer seems to have found his niche: bringing PPP access to the modem-equipped portion of his local calling area, population 14,000. His BBS subscribers nudged him into it, loudly complaining that they were spending \$150 per month or more to reach the nearest Internet POP, some 100 or more miles away. A local rural telephone company claimed to be

working on an Internet POP, but they were planning a \$100,000-plus site with prices to match. Boyer figured he could do it cheaper.

He did, using just **\$15,000** to install a fractional T1 line, eSoft's IPAD, a web server and a new rackful of USR modems. Boyer pegged his prices equally low: **\$10** for 10 hours, **\$20** for 50 hours or **\$30** per month for unlimited PPP time at 28.8 Kbps.

Boyer had his first 14 customers before he even advertised the service. When we interviewed him, his first ad in a local newspaper was just three days old, and he was up to 24 consumer customers, most of them at the **\$30/month** rate. He also had "a fistful of message slips" from local businesses inquiring about 56 Kbps dedicated links, which Boyer offers at **\$250** per month plus telco charges (**\$175** per month).

It's a long stretch for Nautilus to the nearest ISP: its leased line runs from Iola to Wichita to Kansas City, and costs **\$1,400** per month. A full T1 line will cost **\$4,000** per month. Boyer will need to hustle to crack that nut, but as he puts it, "It's nice to be selling something people want, for a change."

So it is, and it's also nice to be able to sell what people want at prices they can afford. Nicer still is the ability to sell to an effectively captive market; it will be decades before any of the major players come to Iola, if ever.

Best of all, in Boyer's opinion, is the privilege of doing what he loves in exactly the place he wants to be: a safe, peaceful environment in which to raise a family. Boyer married Carrie, the daughter of a local family in whose Chinese restaurant the couple first met. They've been blessed with three daughters – Haley, age 2; Karlea, age 6 and Cassandra, born in June, 1995. Boyer's ambitions include creating jobs for local residents. He's already found work for several HTML programmers, and has made arrangements with the local community college to provide Internet training classes for customers.

Boyer and Nautilus are good examples of where today's BBS sysop can find a secure, lucrative market niche. Forget about competing for the business of faceless, faraway corporations. Your next customer is most likely on the other side of your backyard fence, and nobody in the Internet business knows him except you.

GENEALOGY LISTKEEPER

Most of us have had occasion to thank our mothers for making us do things we didn't want to do – like eat Brussel sprouts, brush our teeth and get to school on time. Jack Williams thanks his mother for sparking his interest in genealogy. It took long enough; Williams did not get involved in his mother's lifelong hobby until he retired from the Army in 1975. But he's made up for lost time. He learned, among other things, that one of his ancestors designed the curlicue Coca-Cola logo back in the 1800s. Another relative owned Klapp Castle in Bingam-am-Rhine, Germany.

Williams got into personal computing very early. He still owns one of the very first PCs, an IMSAI 8080 – serial number 20! He also got into the online world when it was more of an island, using the 300 baud Elgin Electronics klunker shown below. He used it to connect with other genealogy fans through FidoNet's genealogy echomail conferences. Eventually, he started his own BBS, **Jack's Emporium**, now at **(540)373-8215** (Fredericksburg, Virginia). Today the Remote Access board runs on a 66 Mhz 80486DX, using Front Door and GEecho Tosser mailer software on one dedicated line. The other line is open to the public at no charge.

Williams became frustrated with the unreliable service he got from amateur FidoNet coordinators. Large amounts of message threads and data files would be delayed for days or completely lost, disrupting the intensive networking and research efforts of genealogists. So Williams started his own network of BBSs in 1990, naming it the **International Genealogy Association Network** or **IGA_Net**. He recruited "about 20 or 30" sysops who were equally disenchanted with

FidoNet. The network grew to about 100 nodes in 1993. Williams found a local assistant sysop and linked his growing North American network with a European genealogy network.

In August of 1993, a tornado "tore out everything" in Williams' neighborhood; "I couldn't take a bath for three days," he recalls. When the lights came back on, Williams found that his two colleagues had "stolen the network," locking Williams out of key sites and advising all member sysops that he had "abandoned" his duties. It took a couple of weeks with a lawyer to abort the attempted coup.



Williams' first 300 baud modem



Jack Williams, Founder, International Genealogy Assn. Network

Today, IGA_Net includes some 250 BBSs worldwide. Williams' board is the global coordination point and keeper of the nodelist. Another system at **(604) 478-7678** in Vancouver, British Columbia, serves as the network's file bank. It houses over 500 Mb of cemetery inventories, lists of prisoners, passenger lists from the Mayflower, census data and many genealogies compiled by individuals.

Williams is dedicated to providing a free resource to the world's genealogists. He also serves as a volunteer tax preparation specialist, helping servicemen all over the world prepare their tax returns each year. Hats off to one of the world's genuine "givers!" ♦

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Fairfield, CT	The Wacko Board	(203) 384-2453	Orange, TX	Snooper's Paradise	(409) 883-2076
Lorette, MB	Twilight Exchange	(204) 878-9616	Westminster, MD	BorderTown BBS	(410) 876-5101
Anniston, AL	Tracks from the Past	(205) 237-6074	Kittanning, PA	Technoweenie Paradyze	(412) 543-6580
Anniston, AL	Oasis BBS	(205) 238-0104	Pittsburgh, PA	Microtech	(412) 635-0934
Fort McClellan, AL	Mississippi Redneck BBS	(205) 820-8451	West Springfield, MA	Society of Acadian Desc.	(413) 732-0884
Tacoma, WA	The Total Access Board	(206) 472-9611	Ware, MA	Morning Star CIS	(413) 967-7378
Tacoma, WA	Infrared Rose	(206) 537-0806	Delafield, WI	Live Wire BBS	(414) 646-8172
North Bend, WA	SeaSoft Systems	(206) 688-0375	Oak Creek, WI	C.A.T.C.H.-BBS	(414) 761-2582
Puyallup, WA	My Desk	(206) 845-2418	Etobicoke, ON	CRS Online	(416) 213-6004
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Clovis, CA	Clovis Connection	(209) 323-7583	Nixa, MO	The Oak Tree	(417) 581-0868
Merced, CA	Merced Central	(209) 385-3238	Mountain Home, AR	Sirius	(501) 424-2510
Fresno, CA	Lighthouse BBS	(209) 497-6722	Fort Smith, AR	Jackalope Junction	(501) 785-5381
Modesto, CA	Root Connection	(209) 576-1606	Paducah, KY	The Data Center BBS	(502) 575-0144
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San Antonio, TX	Naorhy Imperial Republic	(210) 670-0501	Bowling Green, KY	BGAMUG BBS	(502) 793-0300
San Antonio, TX	Retreat House	(210) 684-6531	Louisville, KY	Family Treehouse	(502) 964-6831
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Garland, TX	Ariel Solutions	(214) 530-4736	Gretna, LA	The New Node 3	(504) 391-2929
Grand Prairie, TX	Interface America	(214) 642-6636	Tularosa, NM	MDC Computers BBS!	(505) 585-9632
Mesquite, TX	Resonant Frequency	(214) 686-0427	Los Lunas, NM	Paula's House E Mail	(505) 865-8385
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Anderson, IN	The Mail Room	(317) 640-9759	Deerfield, NH	The Computer Lab	(603) 463-5837
Greenwood, IN	Eagle BBS	(317) 889-4274	Allenstown, NH	Camelot	(603) 485-8703
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Burlington, IA	The Searchers BBS	(319) 752-0030	Manchester, NH	Exile's Gate	(603) 644-5724
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Lincoln, NE	Don's Place	(402) 476-6680	White Rock, BC	CityLynX Services	(604) 535-9826
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Gatesville, TX	Brightwood BBS	(817) 248-1589	North Wales, UK	Coastline Communications	44-1745-855959
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Wichita Falls, TX	21st Century Software Support	(817) 691-9251	Southborough, Kent, UK	The Demo Factory	44-1892-516304
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Redwater, TX	Closing The Gap	(903) 671-2458	Curitiba, Parana	Kanopus BBS	55-41-225-2582
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Elkhart, TX	The BarnOwl BBS	(903) 764-2803	Salvador, BA	Cult BBS	55-71-336-8352
Pensacola, FL	Land of Imagination	(904) 438-2648	Goiânia, GO	MegaByte BBS	55-62-285-1957
Pensacola, FL	Serendipity BBS	(904) 457-4066	Salvador, BA	PowerNippon	55-71-351-0475
Pensacola, FL	The Havn of Rest	(904) 474-0992	Moscow, RU	Policie BBS	70-95-203-2300
Port Credit, ON	Port Credit Bulletin Board	(905) 278-9495			

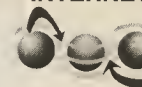
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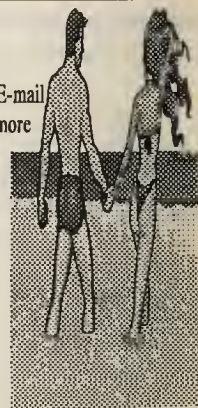
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DVORAK ONLINE by John C. Dvorak

MORE THOUGHTS ON THE VBBS: VIDEO EVERYWHERE

I have this vision of the future where all bulletin board systems are dubbed VBBSs and most of what they do is real-time video-based. I see the day when I call a local BBS number so I can plug into a network of cameras around the SF Bay Area. I punch up camera 14 which is focused on the Bay Bridge to see how heavy the traffic is there. Or maybe camera 12 which leads to the bridge. Other VBBS systems are at a local concert or in someone's kitchen where they are cooking dinner and explaining their techniques. Video everywhere.

The Web people want this too but have some difficulty serving web pages at 30 frames a second. Whatever the case you can be sure that video will soon be hot. Already the CU-See-ME system is finding lots of fanatics and one can only imagine how the raunchy sex aspect of that concept alone will blossom.

So, needless to say, I was intrigued by a new technology announced by NBC Desktop Video in conjunction with Microsoft, Sun Microsystems, and BBN Planet to pump real-time video over the Net using the already obsolete 14.4 kbps modems! I mean, c'mon...really? No way.

Well, according to the press announcement this low bit-rate multimedia player will allow the playing of full motion video with audio (if you can believe that) with the potential for real-time "live" video net broadcasting. I know of nobody who has seen this, by the way. It was developed in conjunction with the GE Research and Development Center. I suspect that it is somehow related to the old DVI technology that RCA developed years ago and sold to Intel where it languished. It's possible that someone had this other technology up their sleeve which made it a good move to dump DVI. What bugs me is that most of the video compression and transmission algorithms are well known and it seems that unless you are using ISDN nothing can prevent herky-jerk video frame rates at slower speeds. What could possibly be different with this? Fractal compression? Or magic? According to one published report, "By the end of the first quarter, 1996, NBC Desktop Video says its technology will allow real time multimedia coverage on the Web of live events." We'll see! If any of this is true it's going to revolutionize desktop video. Here's looking at you!

Issue Two: I'm not going to harp on character mode computing anymore! Just this once, since nobody seems to be listening. Let me just tell you this story. I was breezing along doing some quick searches on

Compuserve for various utilities I needed. I then shot over to a news page and downloaded a few other items. When I use Compuserve, 95% of the time I do it in character mode using the old DOS-based Telix to do it. I have WinCim and the OS/2 version of CIM and I seldom use either package. If I'm checking on mail or forum messages I'll use NavCIS and that's as graphical as I want my Compuserve access.

Recently my wife was complaining about AOL. "I wish there was some way to kill those graphics. Why should I sit and wait for a little picture when I'm trying to get some text to read?" Wait until she gets a load of the World Wide Web. At any speeds less than ISDN, the Web is horrible as it loads those cute pictures. Anyway, she has a point — something nobody is discussing.

While the GUI and color and graphics are all the rage, there is not only room for character-based computing, there is a need for it. Character mode is not like CP/M Z-80's being supplanted by Pentiums. "Oh, gosh, why do you still use an old Z-80?!? Get modern. Get with it!" It's not like that. Ditching character mode computing in favor of 100% graphical mode computing is like ditching books in favor of VCRs. And that's exactly what we are doing regarding character mode computing.

Once Compuserve dumps its character mode system, the service will be horrid. Considering the kinds of databases Compuserve specializes in, it will be impossible to get anything off the system without a lot of hassle. Even if it improved its mediocre GUI to better emulate AOL it would still be a hassle. AOL is a hassle for anything other than chatting and casual perusal of forums. Here's what I mean by hassle.

Let's say I want to download some news items from CIS using character mode. On the Computer Database Plus I select some items; use "s" for scroll; turn on my screen capture and as the file is scrolled I get it all.

Compare that to a similar procedure on the AOL GUI. Let's look at the Cowles Media Daily. Say I want to get the last two weeks of issues, download them and put them on the laptop to read. First I have to select them one at a time. I have to wait for a document window to fill completely so I can save it as a file. I can't capture them except through the logging feature which, although it works, doesn't allow me to scroll back in real-time like I can with any telecom program doing capture. So I can't necessarily see if what I'm getting is what I want.

In addition to his weekly syndicated radio call-in show, "Software/Hardtalk," syndicated newspaper columns, magazine writing for *MacUser*, *PC Computing*, *DEC Professional*, *Information Technology*, and his featured "Inside Track" column in *PC Magazine*, Dvorak is the author of several best-selling books, including *Dvorak's Inside Track to DOS & PC Performance*, *Dvorak's Guide to PC Telecommunications*, and *Dvorak's Inside Track to the Mac*.

I'm a little picky I suppose, especially when looking for faults with the AOL interface which is clearly the best of the lot. It still can't beat the efficiency of character mode on CompuServe.

The problem is with newbies. Johnny-come-latelies who have just gotten into computing now that it's got pretty pictures and seems easier to use. "Lookee, a pretty picture!" The problem is also with more experienced users who don't complain enough. Fact is, nothing is easier to use than the command line, folks. How hard is it to type DIR or WIN? There are situations where the mouse-oriented GUI is better. Cutting and pasting or photo editing for example. But overall the command line is easier and more efficient. Command line computing was always more popular than the Mac, if you haven't noticed.

Anyway, newbies got it in their head that computers should be pretty with lots of pictures and color. So they demand it. OK, I like that too — sometimes — but not if it gets in the way when I have to get work done! And most of the time it does. As an aside, I realize I'm making the argument made by the AS-400 goofballs when they extol the virtues of that machine. Yes, getting work done is the key.

Let me wrap up the diatribe. What I want to say is I beg of you, Compuserve, to always keep the character mode system alive. ♦

Dvorak's Recipe Nook

Chimichurra sauce

I went through a slew of books and found what I could regarding this tasty sauce which you can use to top grilled steak. Essentially it's a mixture of parsley, garlic, oil and vinegar — almost a salad dressing. About half the recipes I researched had hot peppers added. The following recipe is typical.

INGREDIENTS:

1 bunch (about 3 or 4 oz.) of Parsley leaves (remove stems)
1/4 cup fresh oregano
3 or 4 cloves of garlic.
1/2 cup of good extra virgin olive oil.
1/2 cup chopped onion
1/4 cup good red wine vinegar
4 Jalapenos finely diced
Salt and pepper to taste.

Blend in a food processor for a moment

Optional additions I've seen include cilantro, lime juice, mangoes, black beans, Scotch bonnet peppers, habanero, chili arbol.

I'm in the process of trying all the Chimichurra recipes that have been sent to me and I'm still looking for

the perfect combination of ingredients. One drawback, each person with a recipe claims that theirs "is to die for." I'm coming to the conclusion that there is no definitive recipe for this sauce just as there is no definitive recipe for a good barbecue sauce. There are not only regional variations, but personal ones. Recipes which come out of folklore and oral traditions seldom get standardized. While many hail this as a good thing because it means the recipe is "alive" I find it personally annoying since you never know what you're going to get, especially with the people who love adding hot chilis to everything. At least with classic French and Italian cuisine when a recipe is modified as it's passed down somebody attaches their name to it or changes the name completely. Throughout the Americas, whether it be barbecue sauce or chimichurra, it's considered to be pretentious to do that. And maybe Sonny's barbecued ribs a la sauce Jenkins poivre et tomates rouge might be more than a rib muncher would want to deal with. Any more chimichurra sauce recipes will be welcome, though. ♦

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6 Deep Cove BBS	708-827-8625	Custom interactive gaming and multi-user conferences	TBBS 32
7 AlphaOne Online	516-471-8625	Large files base with 3 Gigabytes and CD-ROMs	TBBS 16
8 America's Suggestion Box	516-689-5390	News, publications, Internet email, shareware, games	TBBS 74
9 Lifestyle Online	800-775-7714	Adults only, matchmaking, personals, email	OraComm 400
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11 Chrysalis	404-924-8472	13 Gigs of Shareware, Internet email, Usenet newsgroup	TBBS 10
12 Pleasura Dome BBS	717-657-8899	Information and help of searching for people	TBBS 32
13 INDEX System, The	413-536-4365	34 CD-ROMs online, Internet email, online games	TBBS 16
14 Pennsylvania Online	703-385-4325	Adults only, matchmaking, BBS lists, Internet email, chat	TBBS 24
15 Springfield Public Access	215-443-7390	Online publications, BBS lists, Internet email, chat	Maximus/2
16 OS/2 Shareware	614-224-1635	Internet accounts, 10 Gigs online, Fidonet IC	PCBoard
17 DSC	708-820-8344	4000 Usenet newsgroups, 8 CD-ROMs, family BBS	SHS
18 Wizard's Gata BBS	615-383-0727	OS/2 support and shareware files	PCBoard
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20 Nashville Exchange, The	816-587-3311	Illinois's largest filebase, message base	RA Pro
21 Fila Shop BBS, The	317-359-5199	Internet, Usenet, Fidonet, shareware, online games	Custom
22 Traders' Connection	610-439-1509	Distribution & support for Telix	PCBoard
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25 The	914-667-4066	Large message base, shareware, ads	PCBoard
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		Large shareware system, chat, Internet email	PCBoard
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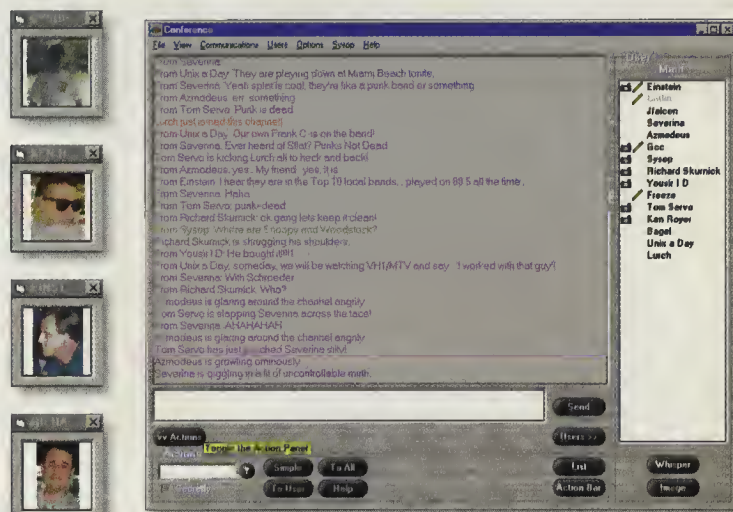
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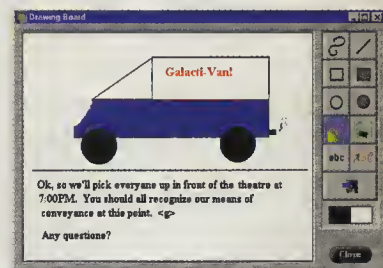
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